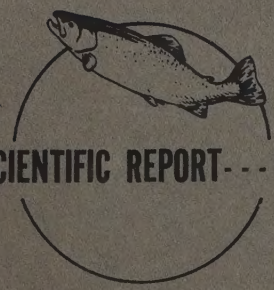
DISPLAY COPY

Summary, Oceanographic and Fishery Data, Marquesas Islands Area, August-September, 1956 (EQUAPAC)



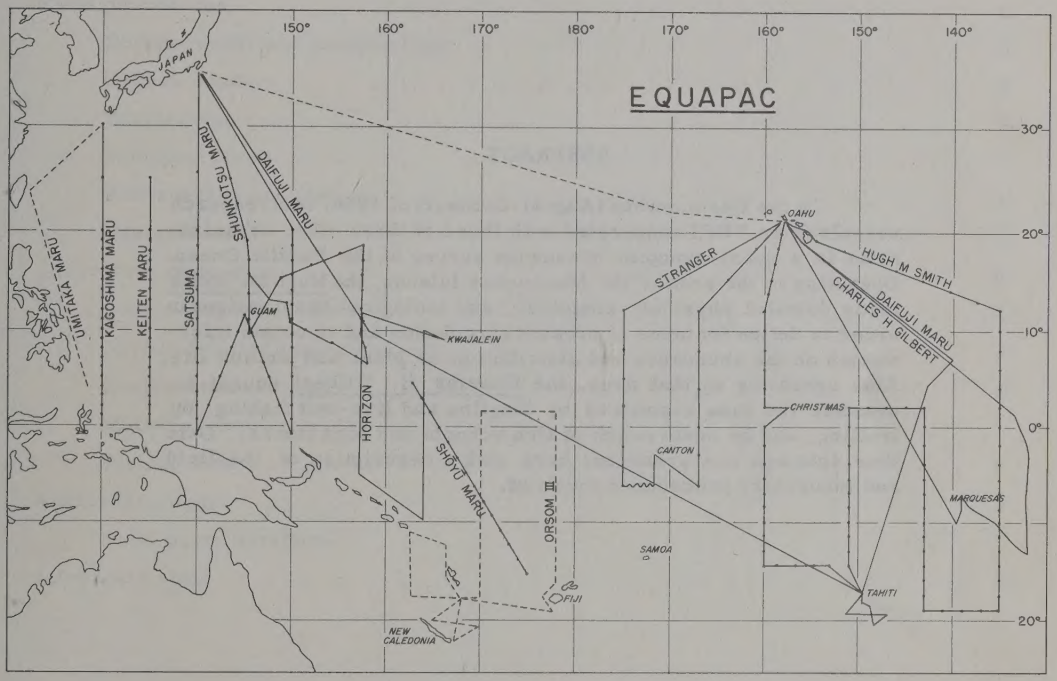
SPECIAL SCIENTIFIC REPORT---FISHERIES No. 217

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Explanatory Note

The series embodies results of investigations, usually of restricted scope, intended to aid or direct management or utilization practices and as guides for administrative or legislative action. It is issued in limited quantities for the official use of Federal, State or cooperating Agencies and in processed form for economy and to avoid delay in publication.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service



SUMMARY, OCEANOGRAPHIC AND FISHERY DATA, MARQUESAS ISLANDS AREA. AUGUST-SEPTEMBER, 1956 (EQUAPAC)

By

Thomas S. Austin, Oceanographer
Pacific Oceanic Fishery Investigations
U. S. Fish and Wildlife Service
Honolulu, T. H.

Special Scientific Report--Fisheries No. 217

WASHINGTON: MAY 1957

ABSTRACT

In the late summer (August-October) of 1956, two research vessels from POFI cooperated with those of three other organizations in a quasi-synoptic oceanwide survey of the Pacific Ocean. Operating in the area of the Marquesas Islands, the Hugh M. Smith made detailed physical, chemical, and biological observations in order to define features of oceanic circulation and to obtain information on the abundance and distribution of plant and animal life. Also operating in that area, the Charles H. Gilbert sought to evaluate the tuna resources by longline and live-bait fishing, by trolling, and by observation of fish schools and bird flocks. Data thus obtained are presented here with a description of the field and laboratory procedures involved.

CONTENTS

	Page
Field procedures	2
Oceanography and meteorology	2
Carbon fixation	3
Zooplankton	3
Midwater trawl	3
Bait surveys and fishing	3
Miscellaneous	4
Laboratory procedures	4
Oceanographic processing	4
Carbon fixation measurements	4
Zooplankton samples	4
Midwater trawl samples	5
Fishing data	5
Acknowledgments	5
Field party personnel	5
Literature cited	5

ILLUSTRATIONS

FIGURE	Page
Frontispiece: Chart showing tracks and positions of oceanographic stations for vessels participating in EQUAPAC.	
1. Track chart showing observations conducted during Hugh M. Smith cruise 35 (EQUAPAC).	1
2. Positions of longline stations occupied by the Charles H. Gilbert cruise 30.	2
3. Track chart for Charles H. Gilbert cruise 30 in the vicinity of the Marquesas Islands.	2
4. Oceanographic station curves, Hugh M. Smith cruise 35.	6

TABLES

Page

1. Summary of observations at BT lowerings, Hugh M. Smith cruise 35 86
2. Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 102
3. Summary of weather observations, Hugh M. Smith cruise 35 111
4. Summary of weather observations, Charles H. Gilbert cruise 30 119
5. Transparency and water color determinations, Charles H. Gilbert cruise 30 . . . 122
6. Common and scientific names of fish taken on EQUAPAC 123
7. Surface troll catch and related data, Hugh M. Smith cruise 35 124
8. Surface troll catch, Charles H. Gilbert cruise 30 124
9. Record of sightings each day of bird flocks and scattered birds, Hugh M. Smith cruise 35 125
10. Record of sightings each day of bird flocks and scattered birds, Charles H. Gilbert cruise 30 127
11. Record of aquatic mammals sighted, Hugh M. Smith cruise 35 128
12. Record of aquatic mammals sighted, Charles H. Gilbert cruise 30 128
13. Longline catch record in numbers of fish, Charles H. Gilbert cruise 30 129
14. Longline station data and catch of tuna per 100 hooks fished, Charles H. Gilbert cruise 30 130
15. Summary of results of pole-and-line fishing in the Marquesas Islands, Charles H. Gilbert cruise 30 131
16. Summary of fishing for bait in the Marquesas Islands, Charles H. Gilbert cruise 30 131
17. Observed oceanographic station data, Hugh M. Smith cruise 35 132
18. Positions and results of C^{14} observations, Hugh M. Smith cruise 35 179
19. Zooplankton station data and sample volumes obtained in oblique hauls, Hugh M. Smith cruise 35 182
20. Zooplankton station data and sample volumes obtained in surface hauls, Charles H. Gilbert cruise 30 185

SUMMARY, OCEANOGRAPHIC AND BIOLOGICAL DATA, MARQUESAS ISLANDS AREA, AUGUST-SEPTEMBER, 1956 (EQUAPAC)

By

Thomas S. Austin, Oceanographer
Pacific Oceanic Fishery Investigations
U. S. Fish and Wildlife Service
Honolulu, T. H.

In recent years a number of descriptive and theoretical papers have been published, each describing various sectors of the Pacific equatorial circulation. The need for a multiple-vessel, quasi-synoptic, oceanwide survey of the area became apparent. A formal plan for such a survey, named EQUAPAC, was adopted in February 1956 at a conference in Honolulu. The Japanese Hydrographic Office and the Pacific Oceanic Fishery Investigations (POFI) of the U. S. Fish and Wildlife Service were designated as coordinating agencies. Participating vessels included those from various Japanese oceanographic and fishery laboratories, the French Oceanographic Institute at Noumea, the Scripps Institution of Oceanography, and POFI. The tracks of the various vessels are shown in the frontispiece of this report.

POFI assigned two vessels to EQUAPAC, the Hugh M. Smith for the oceanographic and the Charles H. Gilbert for the fishing surveys. The multiple-vessel expedition was fortunately timed so that POFI's participation could be considered as a part of an already scheduled program in the Marquesas-Tuamotus area. Thus the data from the Smith and the Gilbert may be evaluated both with reference to the data collected simultaneously by other vessels during EQUAPAC and also with reference to data which will be collected in other seasons by our own ships in the Marquesas-Tuamotus area. The oceanographic and biological data collected from the Smith and the Gilbert are presented in this report, along with a brief narrative text and descriptions of the variations from the routine POFI field and laboratory techniques reviewed in earlier reports.

The Smith departed Honolulu on August 7, 1956 occupied oceanographic stations as shown in figure 1, and returned to Honolulu on October 5, 1956. The Gilbert departed Honolulu on August 6, 1956, conducted fishing and baiting operations at the positions shown in figures 2 and 3, and returned to Honolulu on September 26, 1956.

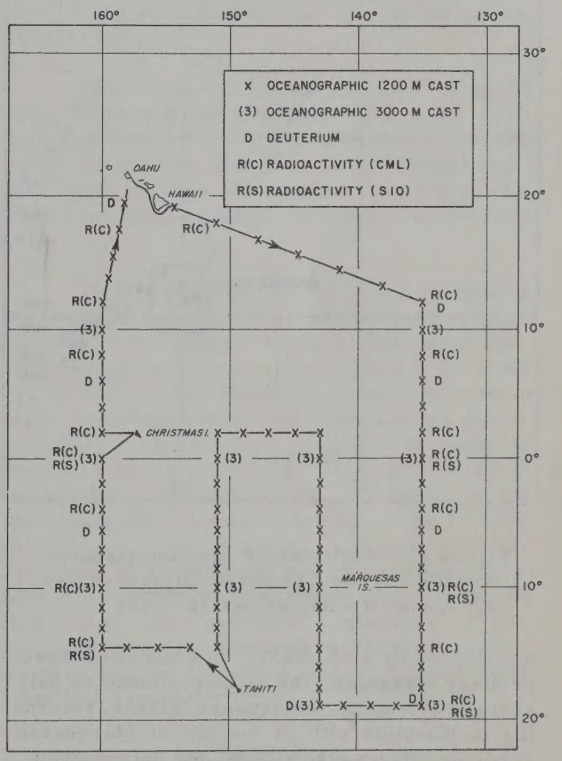


Figure 1.--Track chart showing observations conducted during Hugh M. Smith cruise 35 (EQUAPAC), August 1 - October 5, 1956.

The primary missions of the Smith were to conduct detailed chemical, physical, and biological observations in order to delineate the gross, oceanic circulation features and obtain information on the variations in abundance and distribution of the biota in respect to the environment. The program for the Gilbert was designed to evaluate the tuna resources, principally in the area around the Marquesas, by longline and live-bait fishing, by trolling, and by visual observations of fish schools and

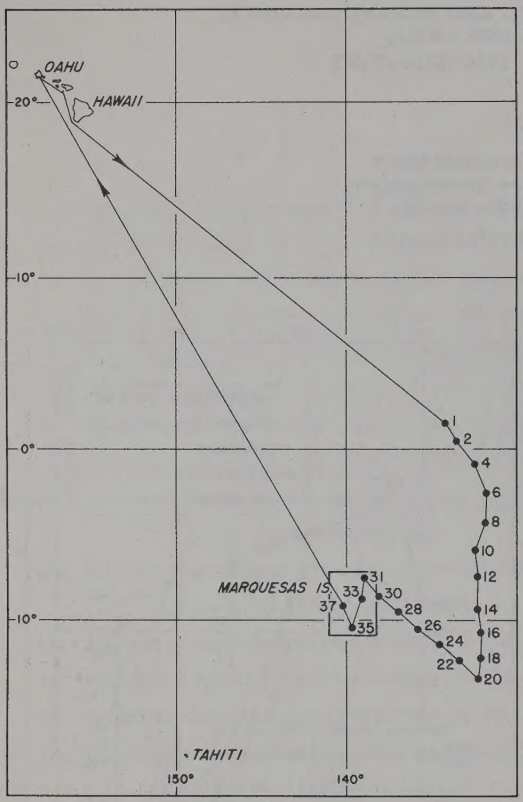


Figure 2.--Positions of longline stations occupied by the Charles H. Gilbert cruise 30, August 6 - September 26, 1956.

accompanying bird flocks. In addition to these primary missions, the Gilbert conducted bait surveys around the Marquesas Islands, returning to Honolulu with 21 buckets of Marquesan sardines (Harengula vittata) for introduction into Hawaiian waters. The Smith returned with a load of potential game fish (1658 specimens) from the island of Moorea, Society Islands, for similar introduction into Hawaiian waters; the latter project being conducted by the Territorial Division of Fish and Game.

FIELD PROCEDURES

Oceanography and Meteorology

The Smith occupied a total of 79 oceanographic stations; 67 of these were to 1200 meters' depth and 12 were to 3000 meters. The position of each station is shown in figure 1. Nansen bottle spacing in the upper 200 meters was determined by the character of the bathythermograph trace obtained just prior to occupying a station. Thirteen bottles were used in the 1200-meter casts. On the 3000-meter stations two casts were made, one from the surface to 800 meters (10 bottles), the other from 600 to 3000 meters (7 bottles).

Water samples for oxygen, salinity, and inorganic phosphate determinations were drawn from each bottle. The oxygen samples were analyzed on board using the modified Winkler method; the phosphate (frozen) and chloride samples were returned to the laboratory at Honolulu for analyses.

Samples for radioactivity determinations were obtained at the surface and 500 meters at the stations indicated on figure 1. At each of these stations, a 15- to 20-minute phytoplankton tow was taken using a Clarke-Bumpus sampler. Water and phytoplankton samples, as appropriate, were shipped to the Central Meteorological Laboratory, Tokyo, Japan, and to the Scripps Institution of Oceanography, La Jolla, California, for analyses.

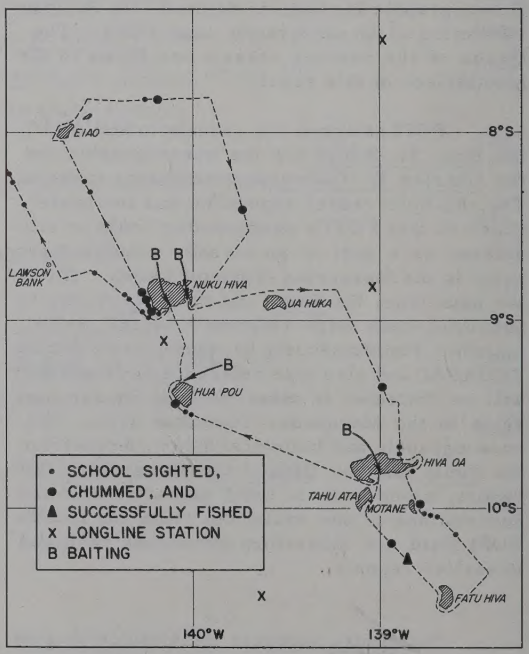


Figure 3.--Track chart for Charles H. Gilbert cruise 30 in the vicinity of the Marquesas Islands showing positions of longline stations, area of scouting and live-bait fishing, and positions of baiting sites.

Samples for analysis of deuterium were taken at stations as indicated on figure 1. These samples were forwarded to Dr. Irving Friedman, U. S. Geological Survey, Washington, D. C., for analyses.

On both vessels the standard weather observations were recorded at the position of each BT. These data, along with the other data normally recorded with each BT lowering, are listed in tables 1 and 2. In addition, the Smith recorded weather observations at 0000, 0600, 1200, and 1800 GCT daily; the Gilbert at 0600 and 1800 GCT. These data, recorded on USWB Form 1210-F, are listed in tables 3 and 4.

During the cruise, a total of 460 BT observations were made from the Smith; lowerings were made at about 15 minutes before arrival at an oceanographic station, at messenger time or just after station, and at 3-hour intervals between stations. The Gilbert made a total of 243 lowerings with one every 3 hours during the runs between Honolulu and the Marquesas and return, three during each longline station, and four each day in the Marquesan area while scouting and live-bait fishing. On the Gilbert, chloride and phosphate samples were obtained once each day, in conjunction with a BT lowering, on all runs except between 5°N. and 5°S. latitude, where they were taken with every other BT, and the resulting data are included in table 2. The recording thermograph was operated continuously on both vessels while underway.

The Gilbert made Secchi disc lowerings and water color determinations (Forel scale) each day at noon whenever weather conditions were suitable (table 5).

Carbon Fixation

The rate of primary productivity was measured in a total of 106 samples by using the carbon isotope (C^{14}) method as developed by Steemann Nielsen (1952) and modified by Doty (King et al., 1957). The samples were collected and processed aboard the Smith by M. Angot, collaborator from the Institut Francais D'Oceanie, New Caledonia. The program was carried out in cooperation with the University of Hawaii.

Zooplankton

South of 12°N. latitude, the Smith made a total of 40 two-net, oblique tows employing on each haul a 1-meter net of 656 Nitex (apertures 0.66 mm. in width) and a 45-cm. net of 308 Nitex (apertures 0.31 mm. in width), the two nets being towed simultaneously from a single wire. These tows were made each night starting at 2100 hours. The 40-minute, oblique, 1-meter net tow, to a depth of about 200 meters, was essentially the standard POFI tow as described by King and Demond (1953). The 30-minute, oblique, 45-cm. net tow to a depth of about 150 meters was adopted as standard for all participants in EQUAPAC at a conference held in Honolulu during February, 1956.

In addition to the above night-time tows, a total of 23 oblique 1-meter net hauls to 200-225 meters were made from the Smith during daylight hours.

The depths at which the nets sampled were estimated by utilizing wire angle and length of wire out. These data were recorded every 2 minutes and the depth determined therefrom on the assumption that the towing wire described a straight line (King and Demond 1953).

During daylight hours while patrolling the longline (see fig. 2 for positions of longline stations), the Gilbert made a total of 19 half-hour, single-net surface tows using a 1-meter net of 656 Nitex. Fifteen half-hour tows were made each night with two nets fishing simultaneously. In addition, in order to examine statistically the variability related to the hauling method, one double-net, half-hour tow and one single-net, 1-hour tow were made as time permitted. The primary purpose of this sampling on the Gilbert was to evaluate these different methods for collecting tuna larvae. As these tows also provided a measure of the standing crop of zooplankton in the surface waters, the resulting data are included in table 19 of this report.

Midwater Trawl

The Smith made 35 1-hour hauls from the surface to approximately 200 meters using the modified, 10-foot Isaacs-Kidd trawl (Devereaux and Winsett 1953). These hauls were made at 2000-2100 hours each evening, just before the plankton tows. A description of the net and hauling method is given by King, et al. (1957).

Bait Surveys and Fishing

Bait surveys and tuna fishing, the latter by longline, trolling and live bait, were conducted primarily from the Gilbert. The Smith performed trolling, incidental to the primary mission with two lines during daylight hours

at an average speed of 9 knots. The Gilbert, as a part of her primary mission, trolled during daylight hours using 6 lines at speeds of from 6-8 knots. The common and scientific names for each species of fish caught from either the Gilbert or the Smith are listed in table 6. The trolling catch of the Smith is listed in table 7; that of the Gilbert in table 8. Both vessels maintained a standard wheel watch for birds, fish, and aquatic mammals; the results of these observations are given in tables 9 to 12.

The Gilbert fished 10 tuna schools by live-bait, pole-and-line methods, trolled a total of 424 line-hours by direct trolling at vessel speeds between 6.4 and 9.8 knots, and fished a total of 20 longline stations. Sixty baskets of 11-hook gear were used at each longline station. The position of each station is shown in figures 2 and 3; the catch results are summarized in tables 13 and 14. The catch statistics for the pole-and-line fishing are given in table 15. A more complete report describing the Gilbert's fishing methods and results will be published in the near future.

At 7 baiting stations located at positions shown in figure 3, a total of 235 buckets of Marquesan sardines (Harengula vittata) and 8 of goat fish (Upeneus parvus) were captured. The catch at each station is listed in table 16. A detailed report on the distribution and abundance of bait in the Marquesas Islands will be prepared following the January-March 1957 cruise of the Gilbert to this area.

Miscellaneous

The EDO depth recorder was used on both vessels to study the deep scattering layer. The Gilbert obtained soundings at various positions in the area of the Marquesas Islands.

The Hardy Continuous Plankton Recorder was towed by the Gilbert for five days (1,187 miles) from Lawson Bank, Marquesas (see fig. 3) to 8°30'N., 150°19'W. The recorder became inoperative during the fifth day of continuous towing.

The Gilbert field party arranged for POFI to obtain copies of the records from the weather stations on Nuku Hiva and Hiva Oa and for a Marquesan weather observer to take weekly sea surface temperatures and salinity samples. The Smith field party serviced the weather instruments at the Christmas Island station.

The Gilbert made night-light collections near the islands of Eiao and Hiva Oa (see fig. 3).

LABORATORY PROCEDURES

Oceanographic Processing

The salinity samples were analyzed by Fajans' modification of the Mohr method (Van Landingham 1957). The phosphate samples were analyzed by the hydrazine sulphate modification of Denige's method (King et al. 1957). Stations 1 to 6 were deleted when samples were contaminated by brine solution during freezing. After station 6 all samples were dry frozen. An accident in the laboratory contaminated stations 14, 17 and 25. Stations 35, 55, 62 and 66 were deleted as examinations indicated they were erroneous. It should be pointed out that further analysis may necessitate additional station deletions. As previously mentioned, the dissolved oxygen analyses were completed aboard the Smith.

The oceanographic station data were processed with the techniques described by Montgomery (1954), Montgomery and Wooster (1954), Stroup (1954), and King et al. (1957). The observed data from each station are listed in table 17; the station curves are reproduced in figure 4.

Carbon Fixation Measurements

A detailed description of laboratory procedures for the determination of the quantity of C^{14} photosynthetically fixed per unit of time, and the associated calculations has been given by King et al. (1957). The counting, done with a Tracerlab SC16 windowless gas flow counter and a Tracerlab 1000-Scaler of a Nuclear Chicago 161A-Scaler, was performed at the University of Hawaii under the supervision of M. S. Doty. The results of the C^{14} measurements are given in table 18.

Zooplankton Samples

The displacement volumes of the plankton from the oblique tows made by the Smith and the surface tows made by the Gilbert are given in tables 19 and 20. These volumes were determined after removing all fish eggs and larvae as well as all "jellies" greater than 2 cm. in length. The details of the method are described by Hida and King (1955).

The flowmeter used with the 45-cm. net recorded to 10,000 revolutions and then repeated the cycle. The upper limit of 10,000 was sometimes exceeded during the 30-minute oblique tows; thus it was necessary to calibrate the flowmeter in the 45-cm. net against that in the 1-meter net. The resultant correction factors

were used in determining the volumes shown in table 19.

Midwater Trawl Samples

The volumes and group counts of the organisms captured in the midwater trawl hauls made during EQUAPAC will be published in a later report.

Fishing Data

No special methods or techniques were used during the preparation of the fishing data included in this report.

ACKNOWLEDGMENTS

Field Party Personnel

Hugh M. Smith

B. Collinson	- Master
M. O. Rinkel	- Field Party Chief
R. Callaway	- Oceanographer
A. Shimomura	- Fishery Aid
T. Naito	- Fishery Aid
M. Angot	- Collaborator, Institut Francais D'Oceanie, New Caledonia
C. Nemoto	- Collaborator, Territory of Hawaii, Division of Fish and Game (on Tahiti - Honolulu leg only)

Charles H. Gilbert

W. Tanaka	- Master
D. W. Strasburg	- Field Party Chief
R. V. Henrickson	- Fishery Aid

Personnel at the POFI laboratory, and elsewhere, responsible for the processing of the samples and data from EQUAPAC include:

Oceanography	- M. L. Godfrey M. O. Rinkel J. Van Landingham
Zooplankton	- T. S. Hida
Fishing	- H. O. Yoshida
C^{14}	- M. S. Doty and M. Oguri (University of Hawaii)

The list of common and scientific names of fish (table 6) was prepared by D. Strasburg.

LITERATURE CITED

DEVEREAUX, ROBERT F. and R. C. WINSETT
1953. Isaacs-Kidd midwater trawl, final report. Scripps Institution of Oceanography, Oceanogr. Equip. Rept. No. 1, 21 pp.

HIDA, THOMAS S. and J. E. KING
1955. Vertical distribution of zooplankton in the central equatorial Pacific, July-August 1952. U. S. Fish and Wildlife Serv., Spec. Sci. Rept.--Fish. No. 144, 22 pp.

KING, JOSEPH E., T. S. AUSTIN and M. S. DOTY
1957. Preliminary report on expedition EASTROPIC. U. S. Fish and Wildlife Serv., Spec. Sci. Rept.--Fish. No. 201, 155 pp.

_____ and JOAN DEMOND
1953. Zooplankton abundance in the central Pacific. U. S. Fish and Wildlife Serv., Fish Bull. 54(82): 111-144.

MONTGOMERY, RAYMOND B.
1954. Analysis of a Hugh M. Smith oceanographic section from Honolulu southward across the Equator. Jour. Mar. Res. 13(1): 67-75.

_____ and W. S. WOOSTER
1954. Thermosteric anomaly and the analysis of serial oceanographic data. Deep-Sea Res. 2(1): 63-70.

STEEMANN NIELSEN, E.
1952. The use of radio-active carbon (C^{14}) for measuring organic production in the sea. Jour. du Conseil 18(2): 117-140.

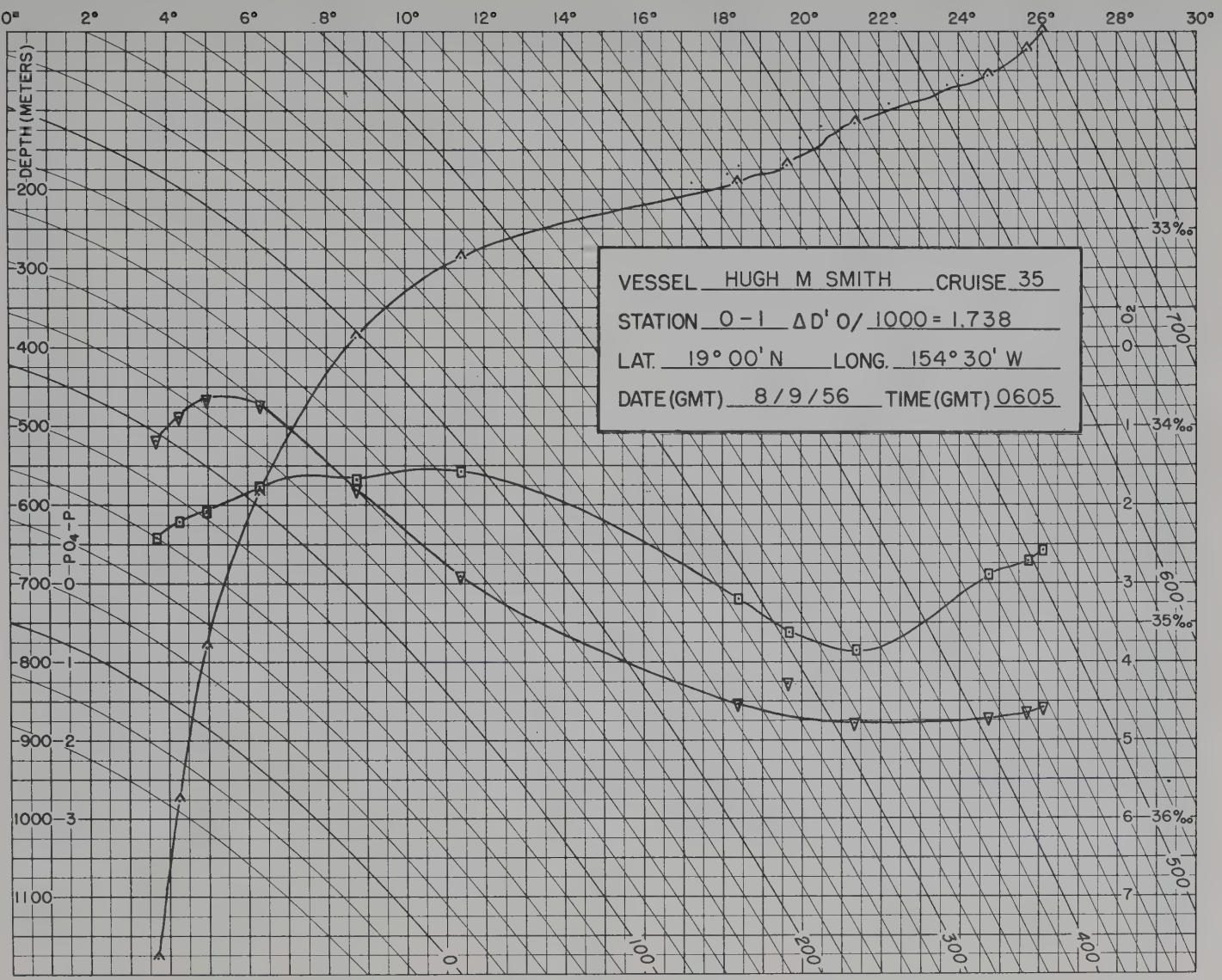
STROUP, EDWARD D.
1954. Mid-Pacific oceanography, part IV, transequatorial waters January-March 1952. U. S. Fish and Wildlife Serv., Spec. Sci. Rept. --Fish. No. 135, 52 pp.

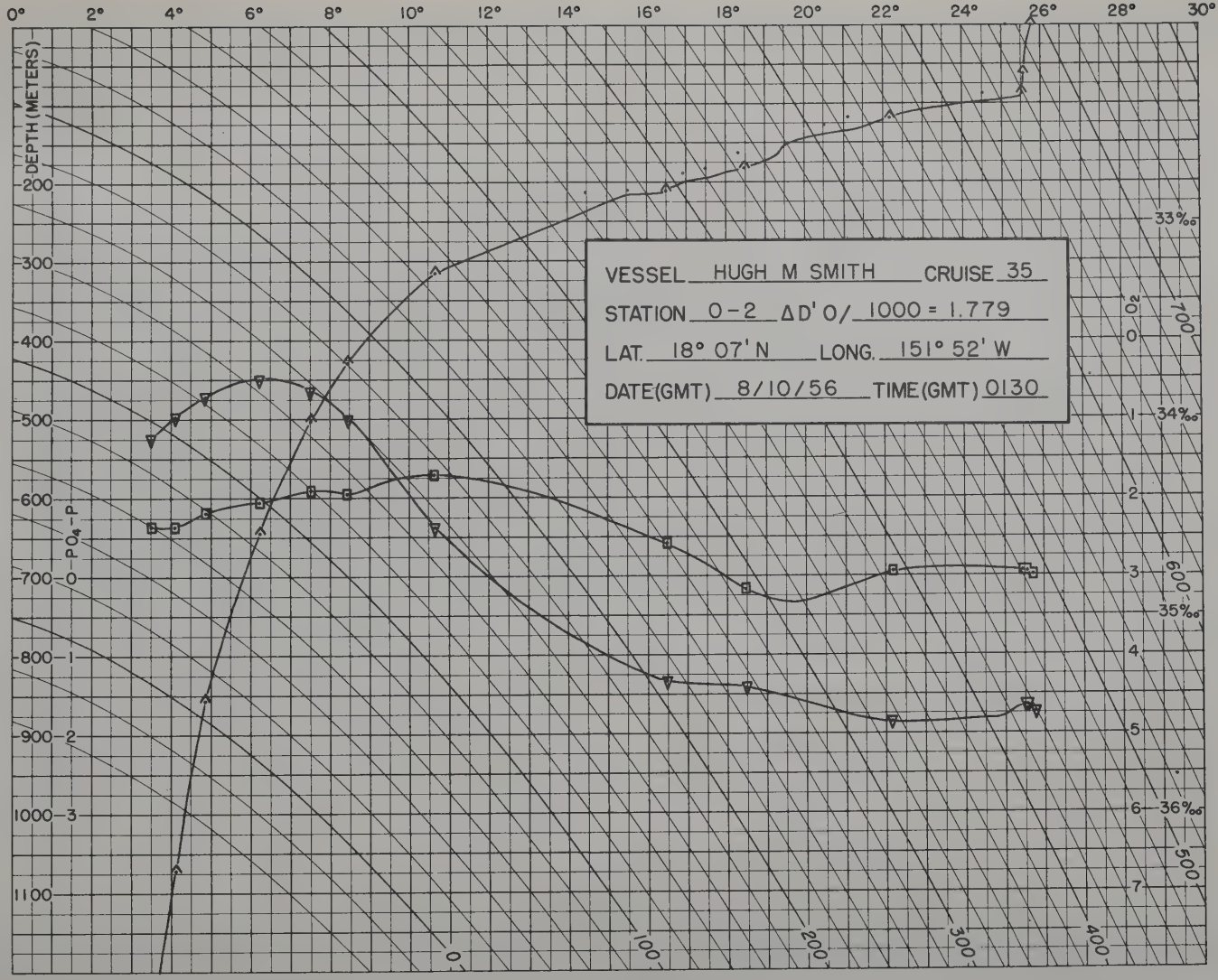
VAN LANDINGHAM, JOHN W.
1957. A modification of the Knudsen salinity determination. Jour. du Conseil 22(2): 174-179.

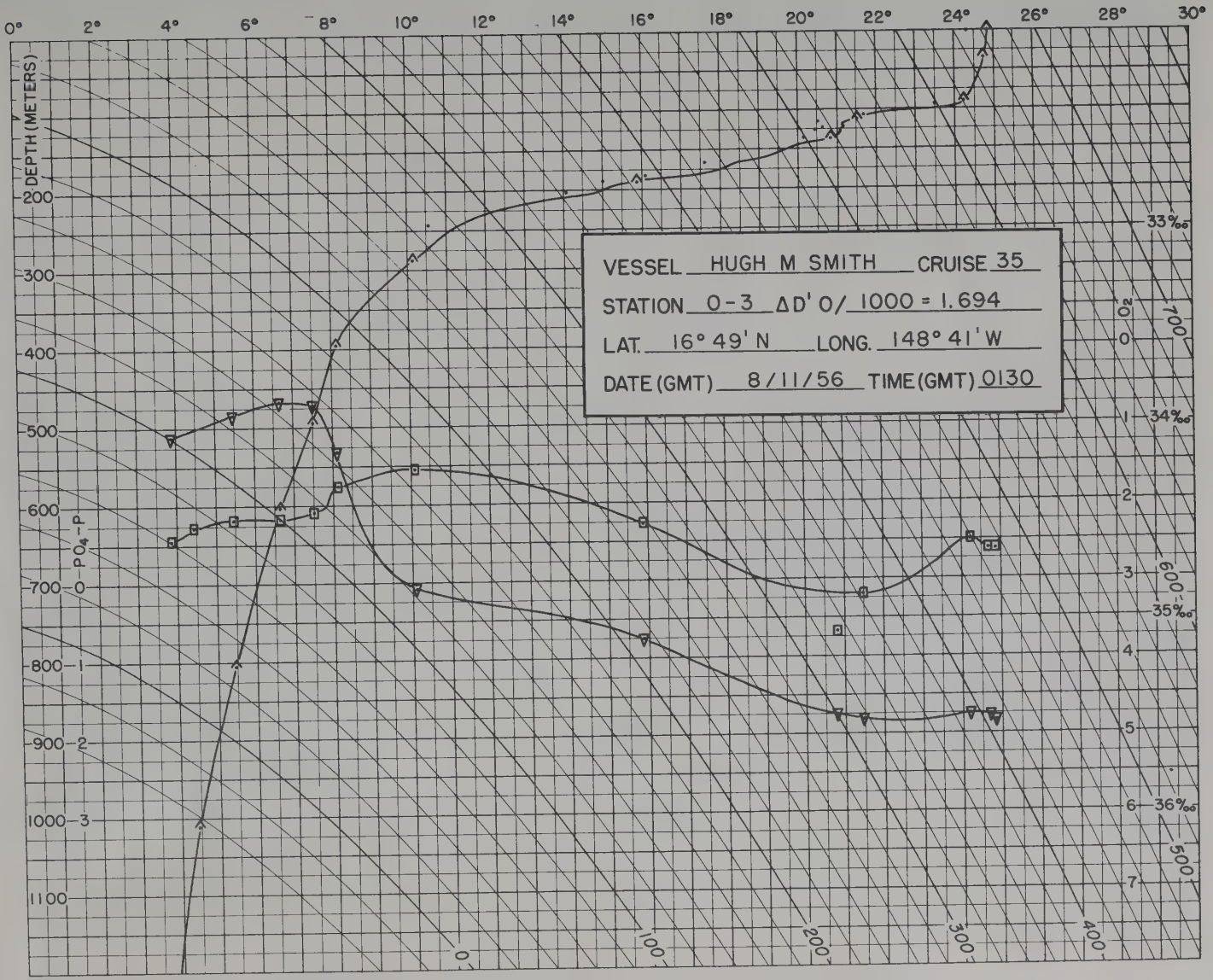
Figure 4.--Oceanographic station curves, Hugh M. Smith cruise 35; the symbols used are as follows:

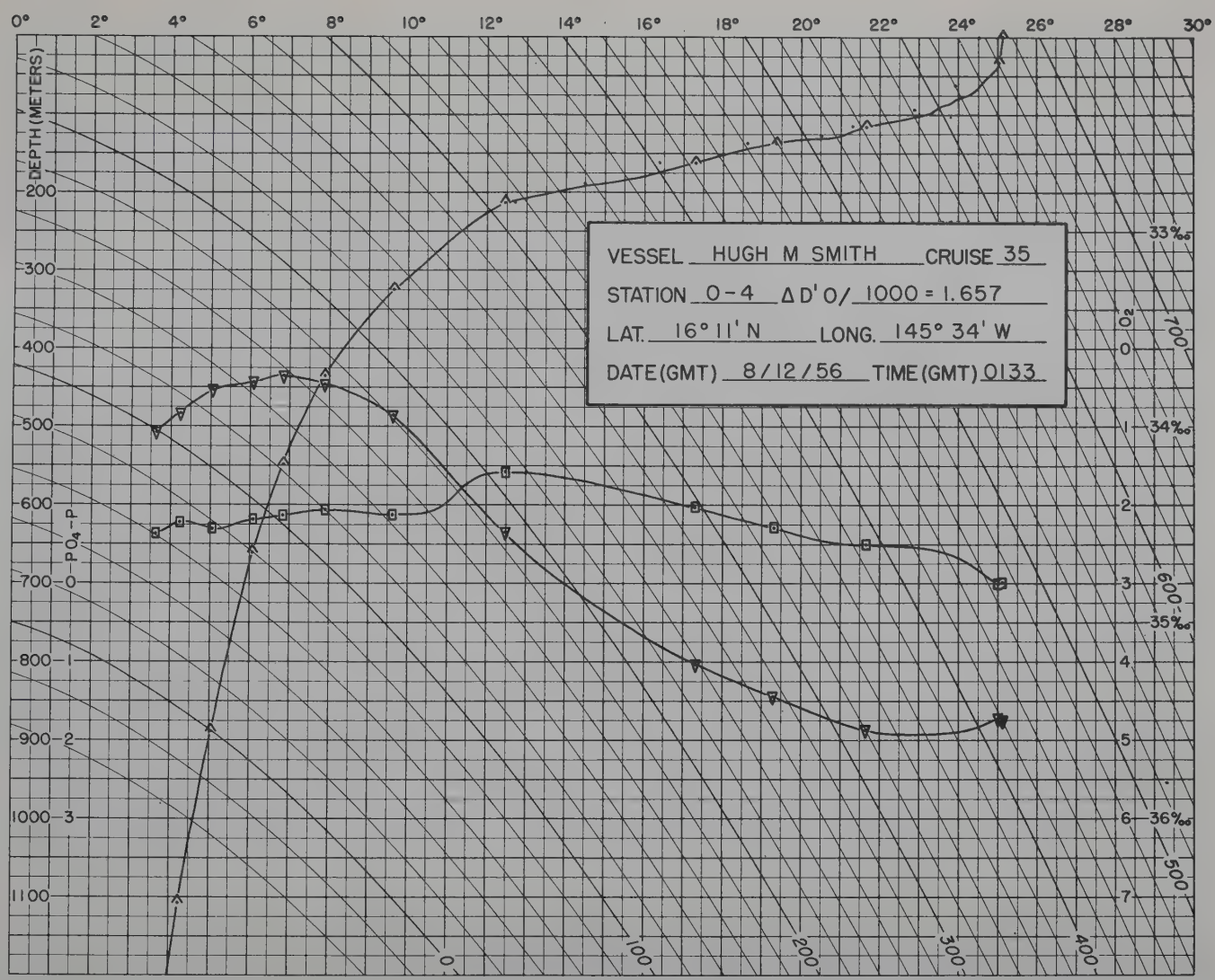
- Reversing thermometer temperatures °C.
- BT temperature °C.
- Salinity ‰
- Dissolved oxygen ml./L.
- Inorganic phosphate μg at./L.

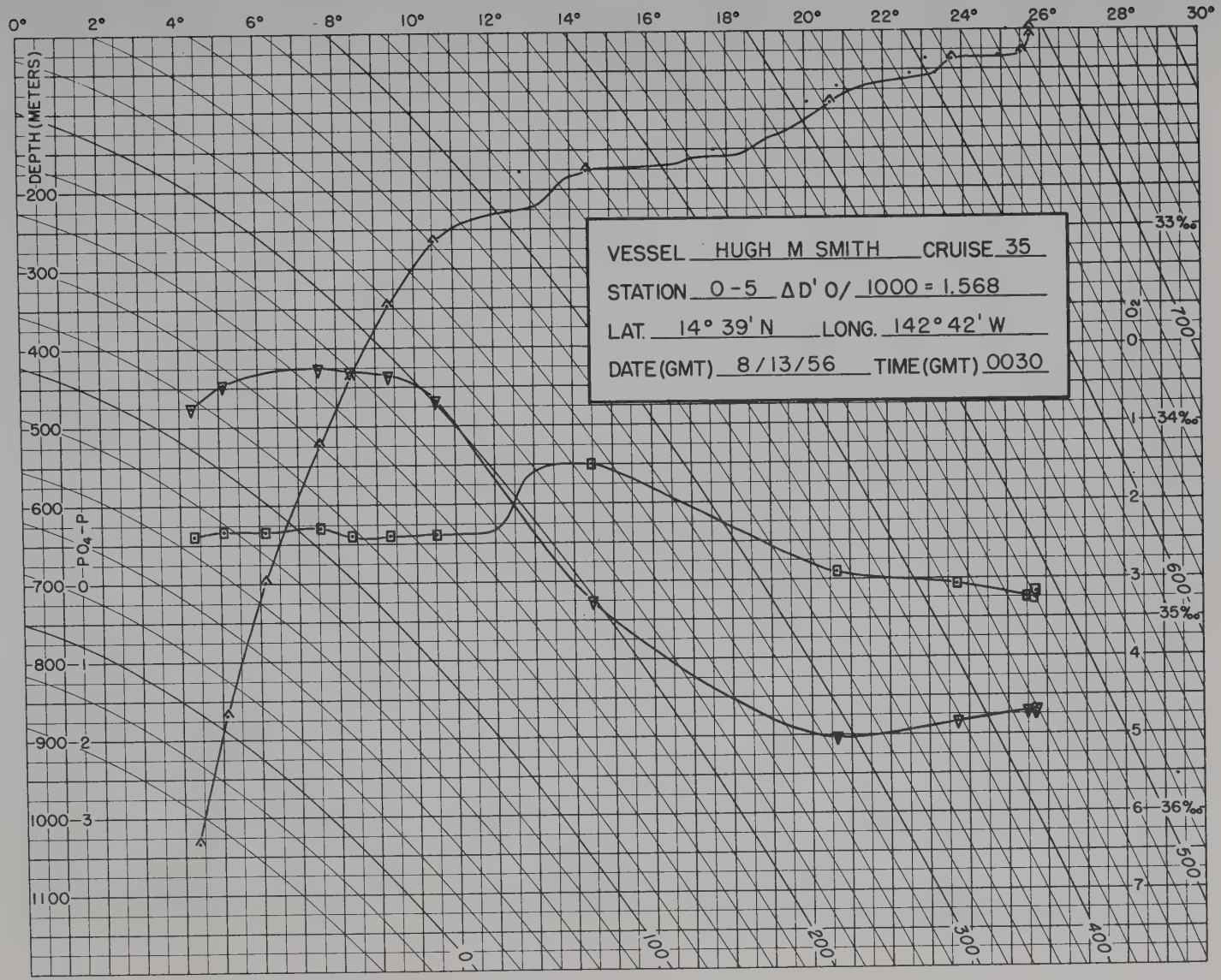
Thermosteric anomaly (oblique lines) are in centiliters per ton (see Montgomery 1954). Where temperatures of paired thermometers differed by more than 0.05°C. below 300 m. or more than 0.10°C. above 300 m., both values are plotted and designated by the symbol . The other variables are plotted for each of the temperature values, e.g., station O-22.

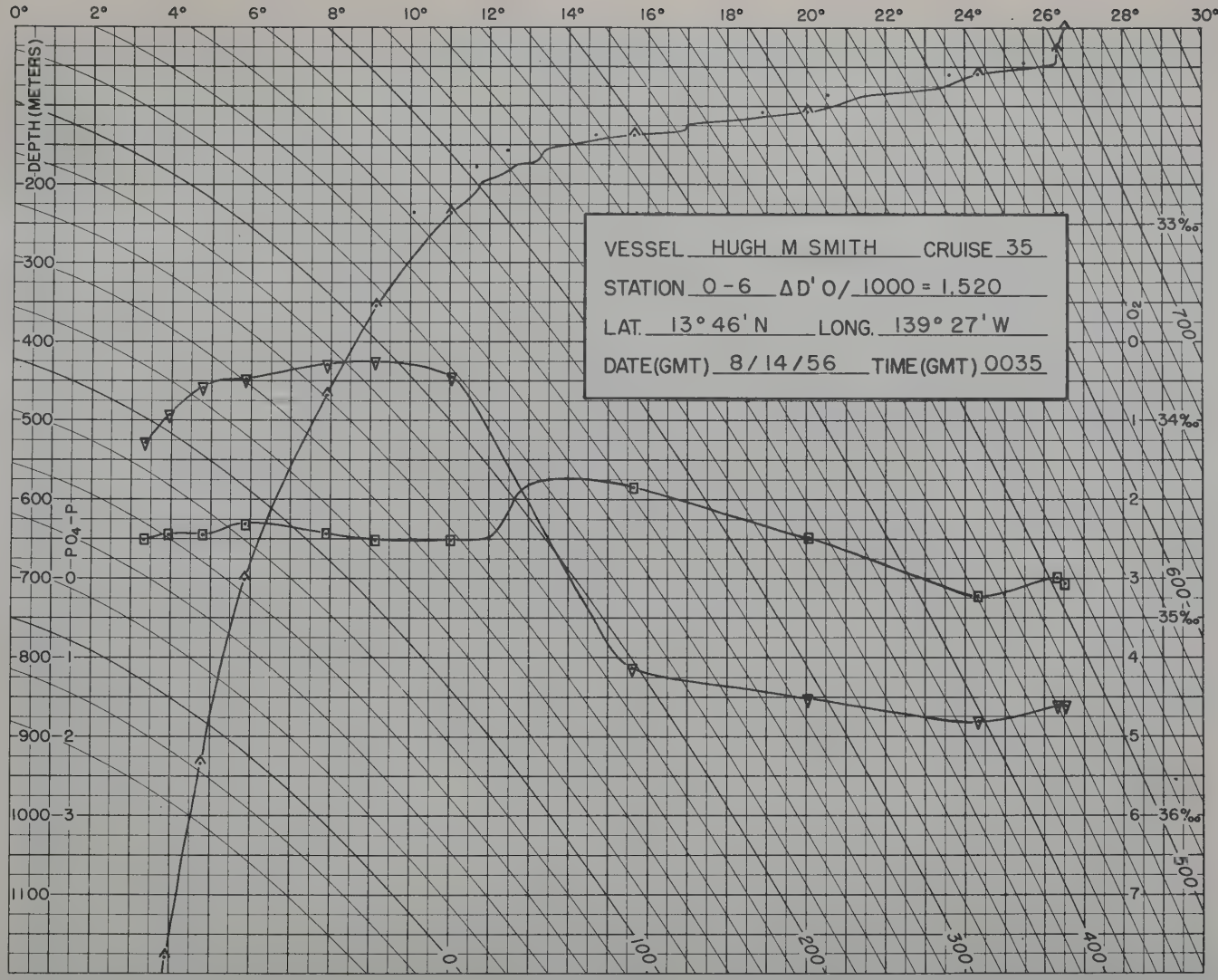

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
100 200 300 400 500 600 700 800 900 1000 1100
0 1 2 3
PO_4-P
33‰ 34‰ 35‰ 36‰
0 100 200 300 400 500 600 700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-1 ΔD' O/ 1000 = 1.738
LAT. 19° 00' N LONG. 154° 30' W
DATE (GMT) 8/9/56 TIME (GMT) 0605

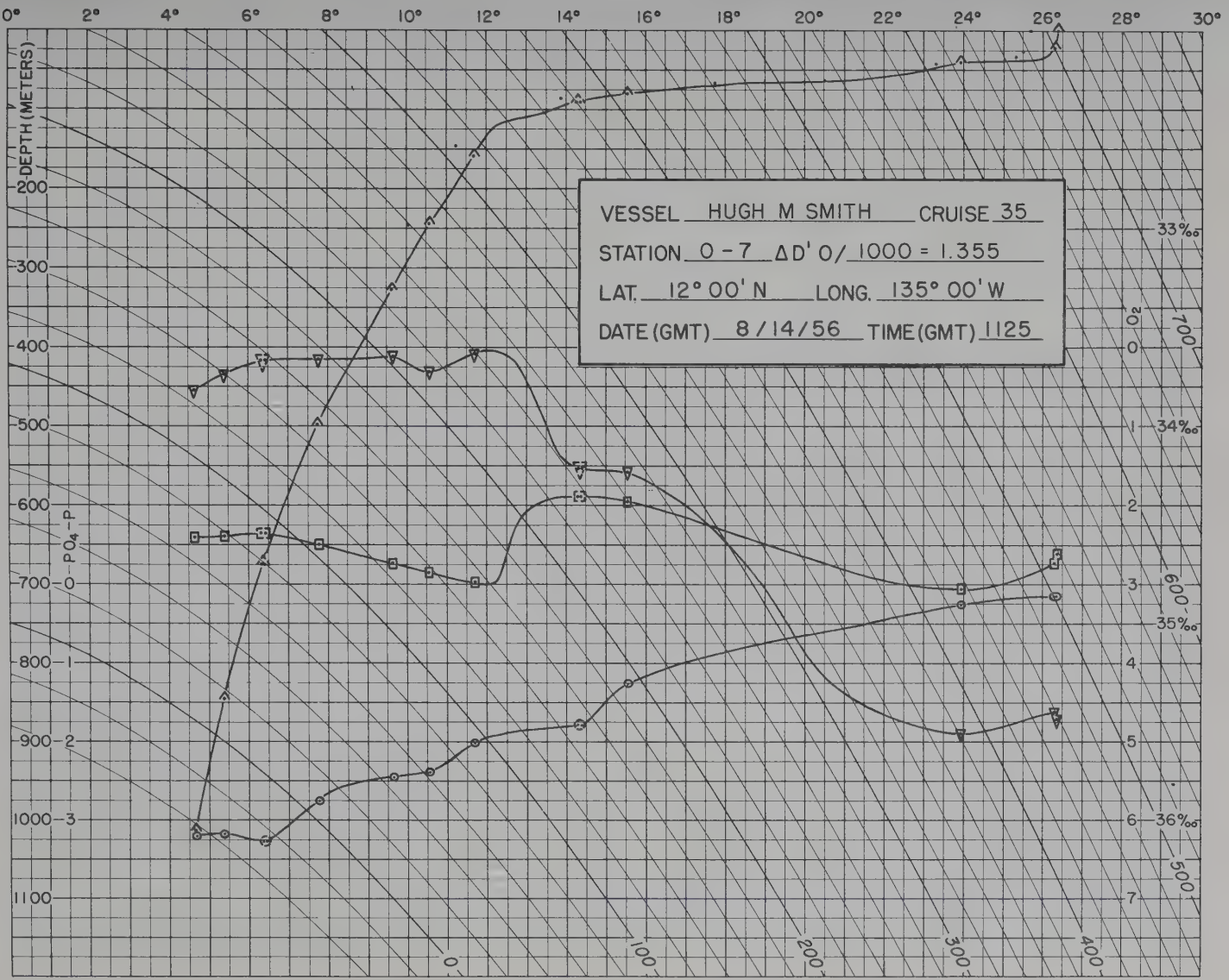

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-2 ΔD' O/ 1000 = 1.779
LAT. 18° 07' N LONG. 151° 52' W
DATE(GMT) 8/10/56 TIME(GMT) 0130

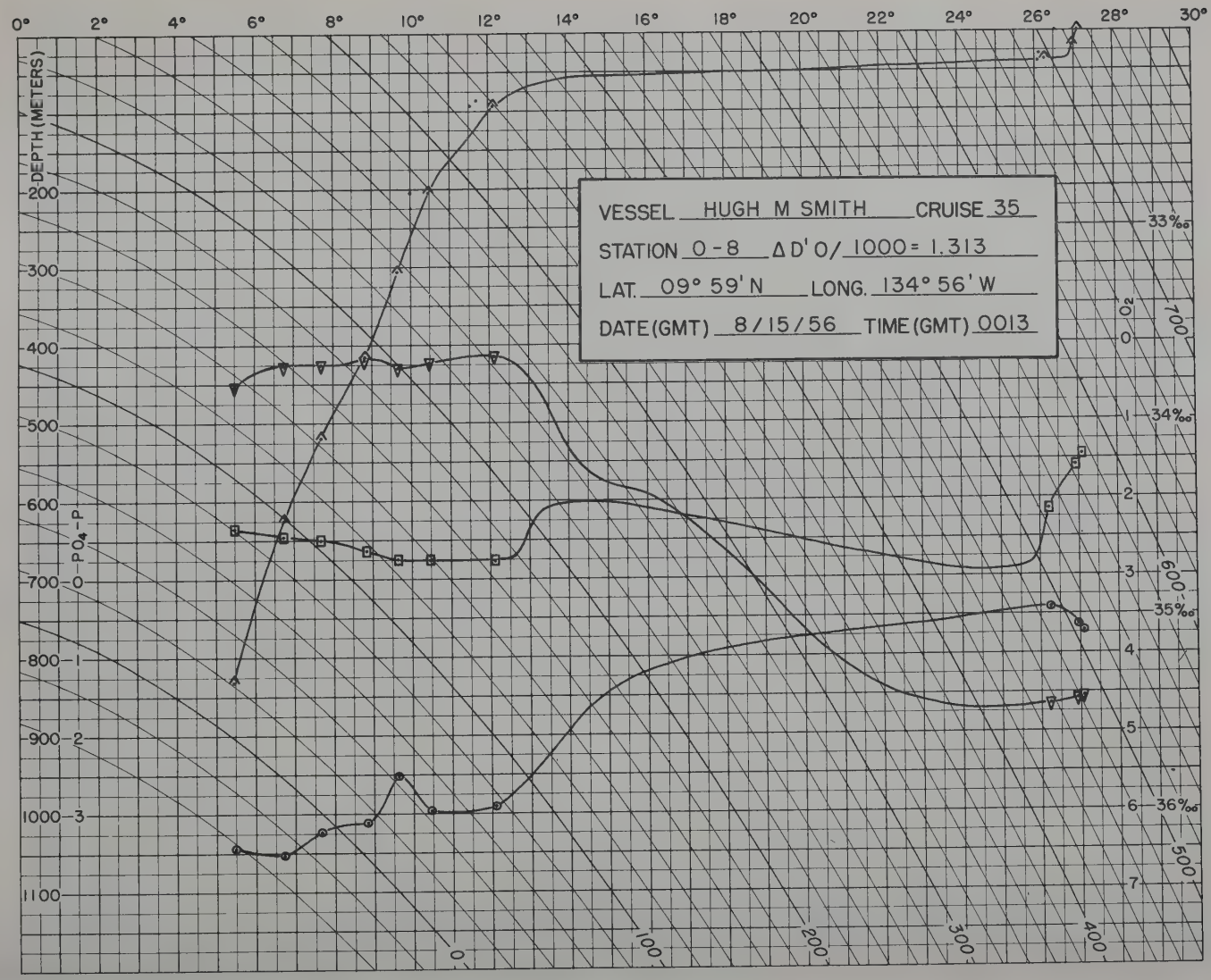

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-3 ΔD' 0/1000 = 1.694
LAT. 16° 49' N LONG. 148° 41' W
DATE (GMT) 8/11/56 TIME (GMT) 0130

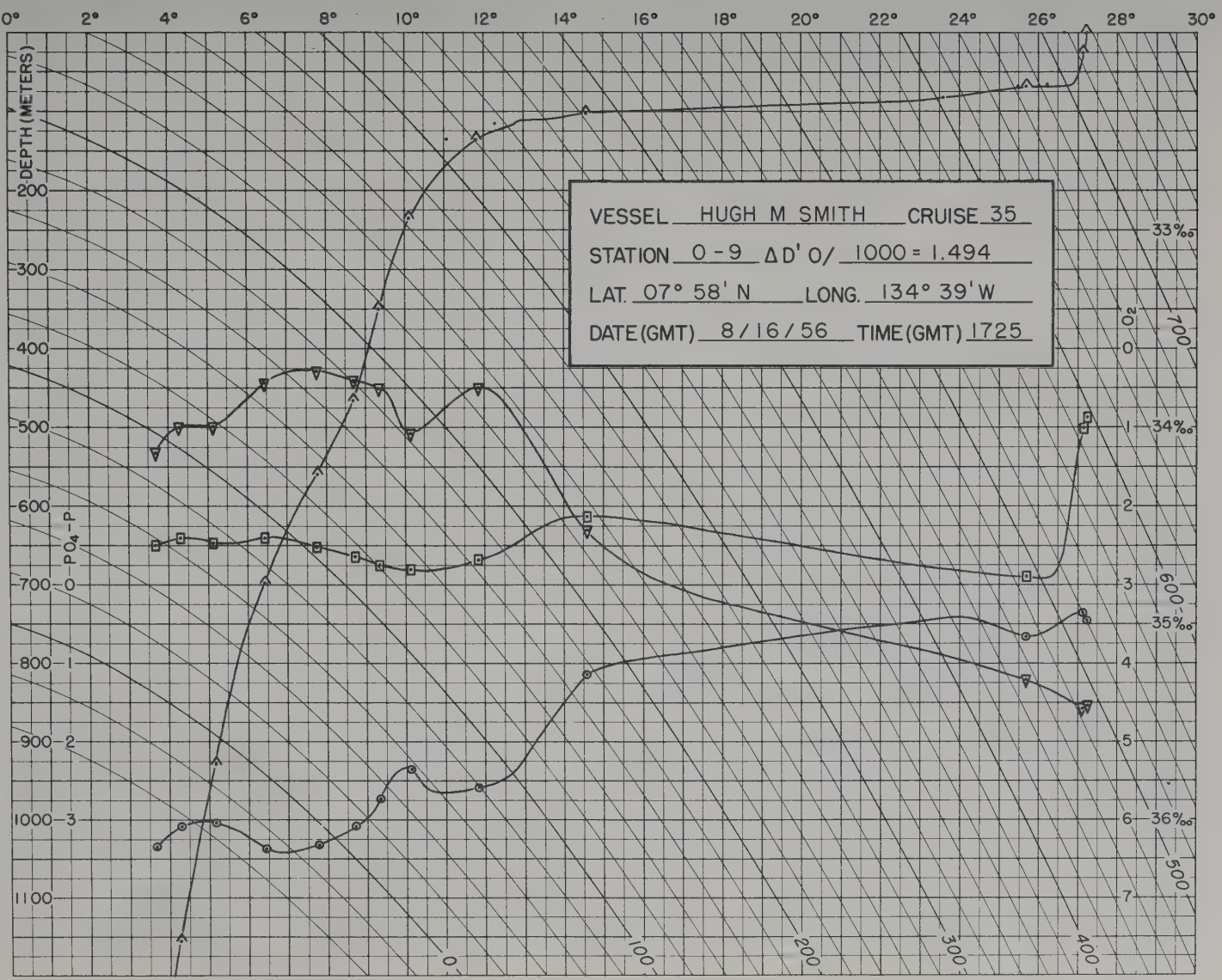

VESSEL HUGH M SMITH CRUISE 35
STATION 0-4 ΔD'O/1000 = 1.657
LAT. 16° 11' N LONG. 145° 34' W
DATE (GMT) 8/12/56 TIME (GMT) 0133
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

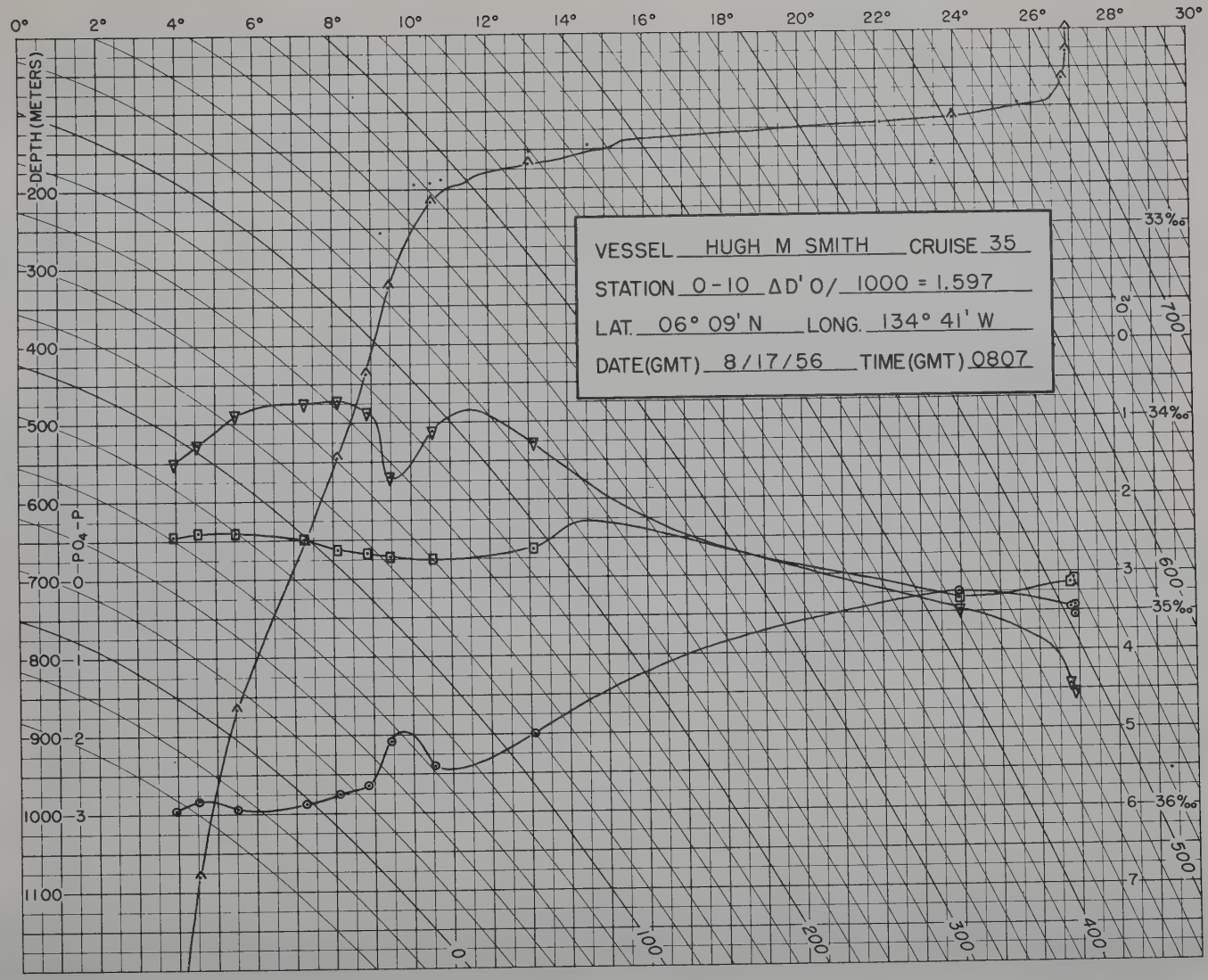

VESSEL HUGH M SMITH CRUISE 35
STATION 0-5 ΔD' O/ 1000 = 1.568
LAT. 14° 39' N LONG. 142° 42' W
DATE (GMT) 8/13/56 TIME (GMT) 0030
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

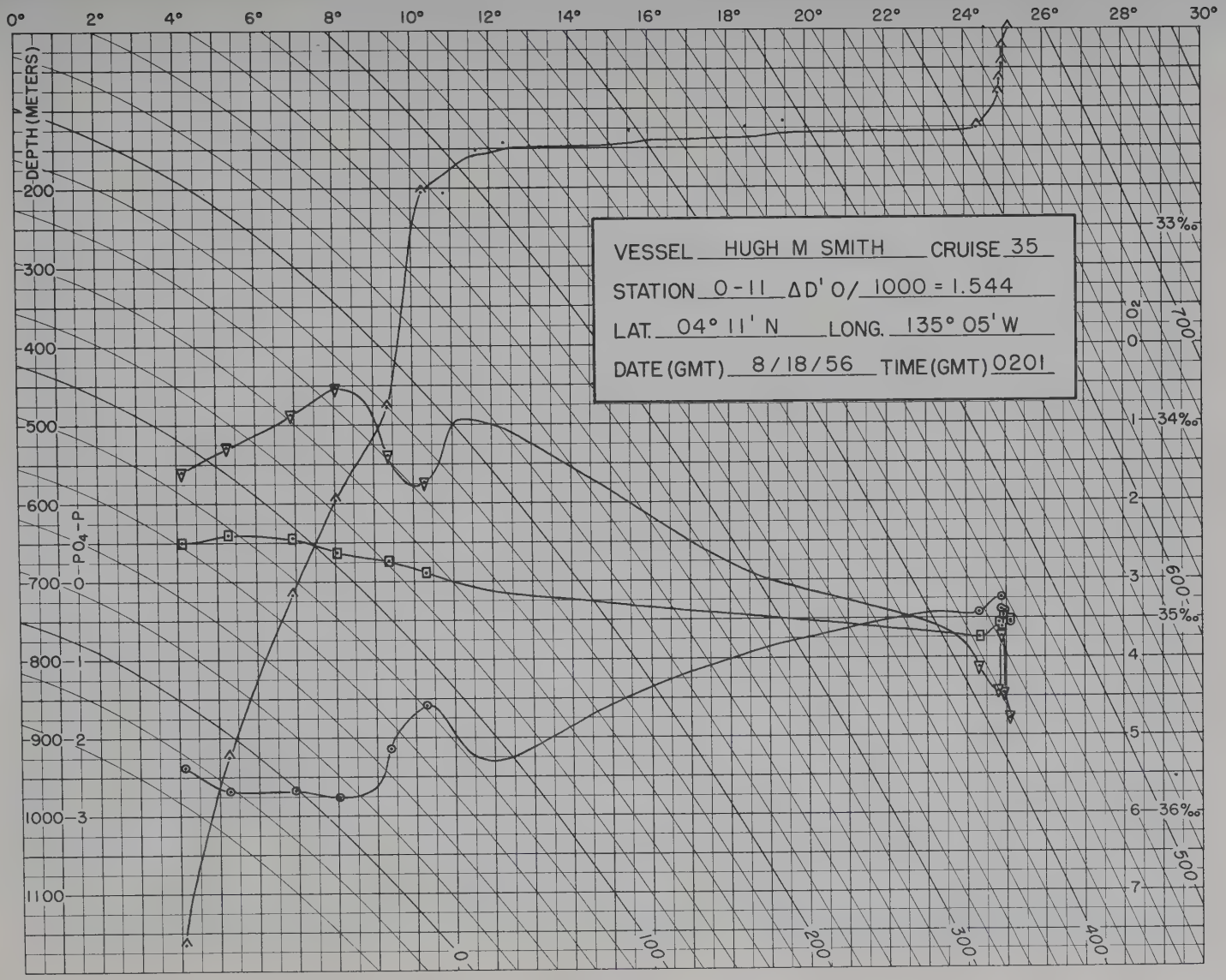

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-6 ΔD' 0/1000 = 1.520
LAT. 13° 46' N LONG. 139° 27' W
DATE(GMT) 8/14/56 TIME(GMT) 0035

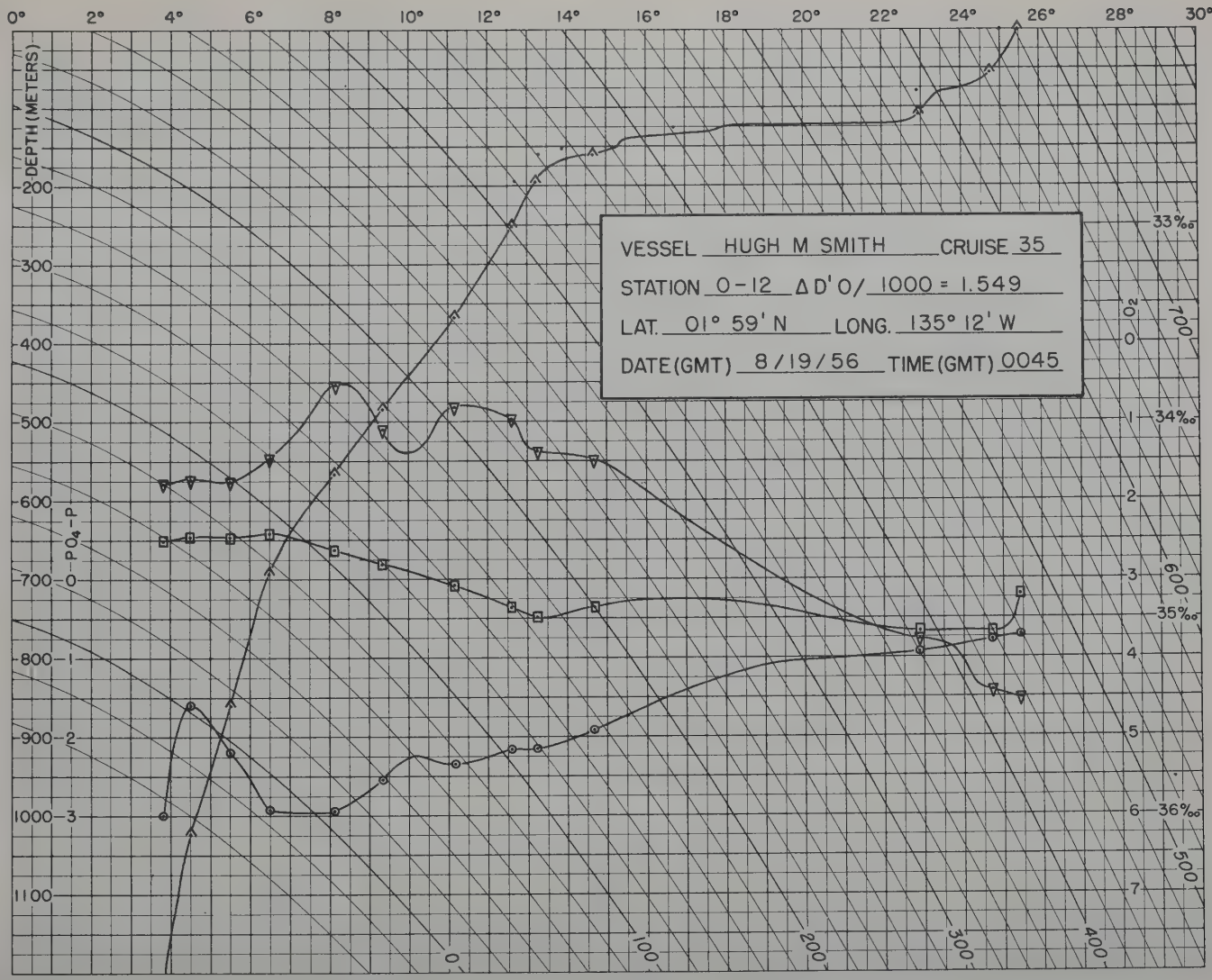

VESSEL HUGH M SMITH CRUISE 35
STATION 0 - 7 ΔD' O/ 1000 = 1.355
LAT. 12° 00' N LONG. 135° 00' W
DATE (GMT) 8/14/56 TIME (GMT) 1125
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700

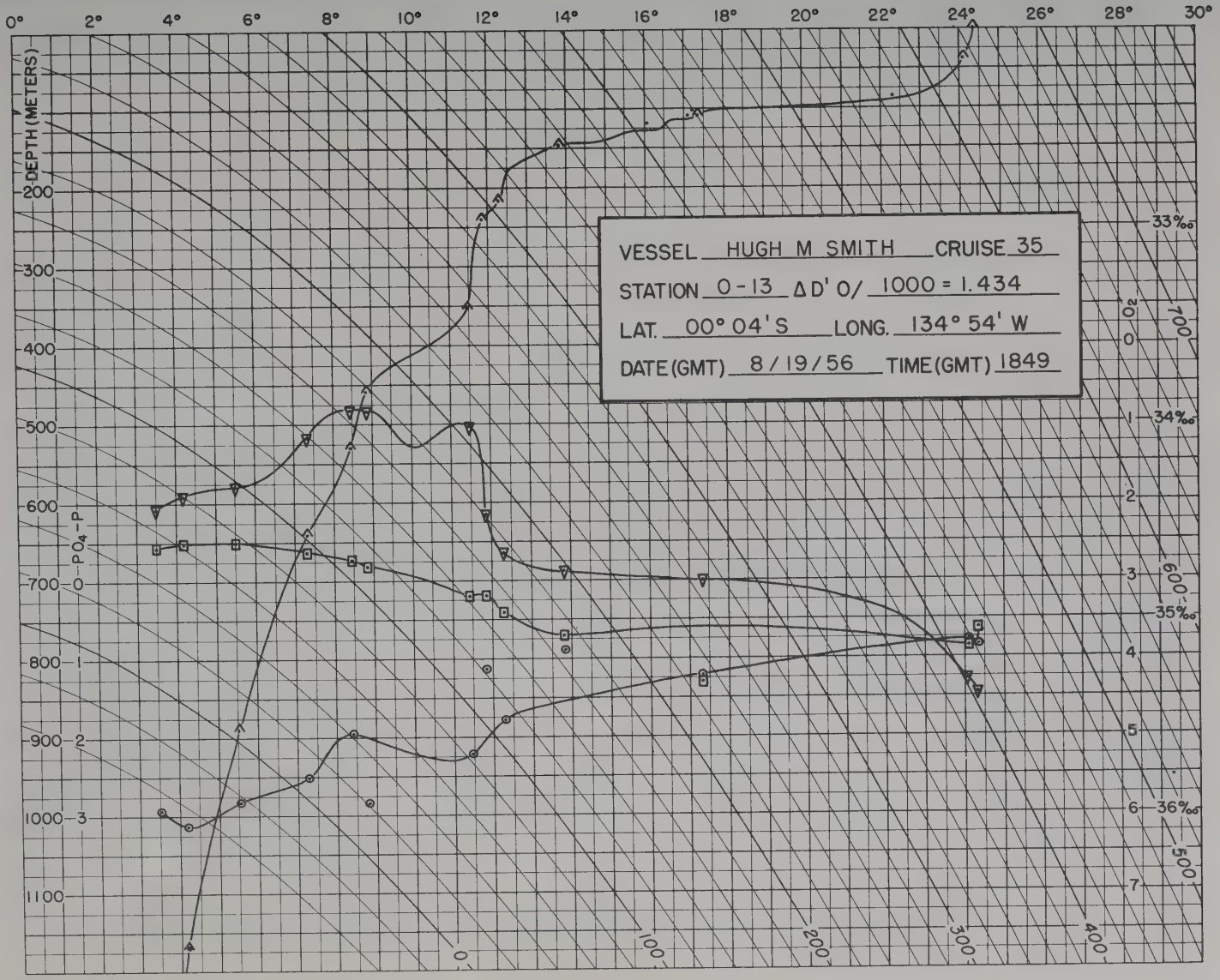

VESSEL HUGH M SMITH CRUISE 35
STATION 0-8 ΔD'O/1000 = 1.313
LAT. 09° 59' N LONG. 134° 56' W
DATE (GMT) 8/15/56 TIME (GMT) 0013
DEPTH (METERS)
O-PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

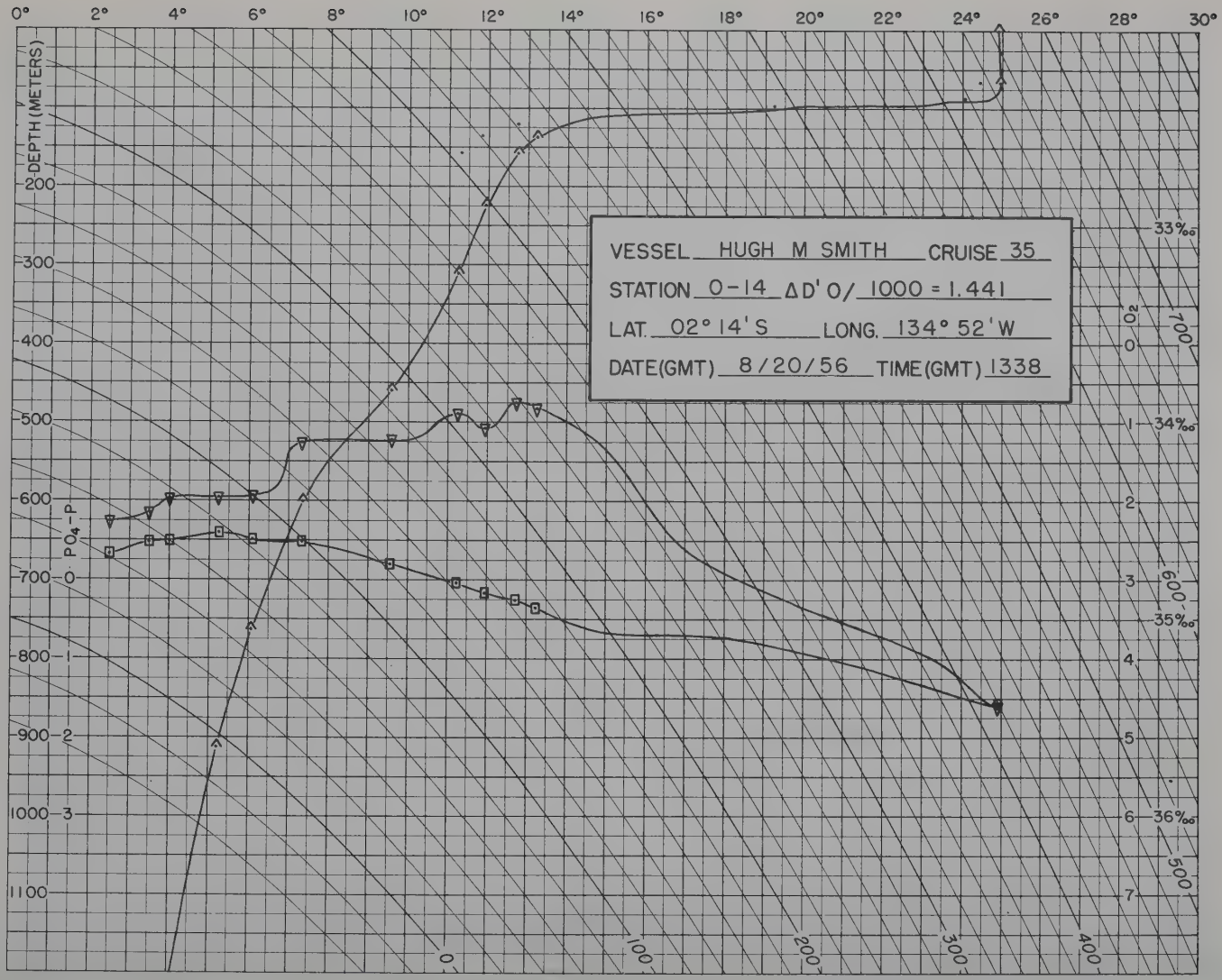

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
VESSEL HUGH M SMITH CRUISE 35
STATION 0-9 ΔD' O/ 1000 = 1.494
LAT. 07° 58' N LONG. 134° 39' W
DATE (GMT) 8/16/56 TIME (GMT) 1725
33‰
34‰
35‰
36‰
O2
0
1
2
3
4
5
6
7
700
600
500
400
300
200
100
0

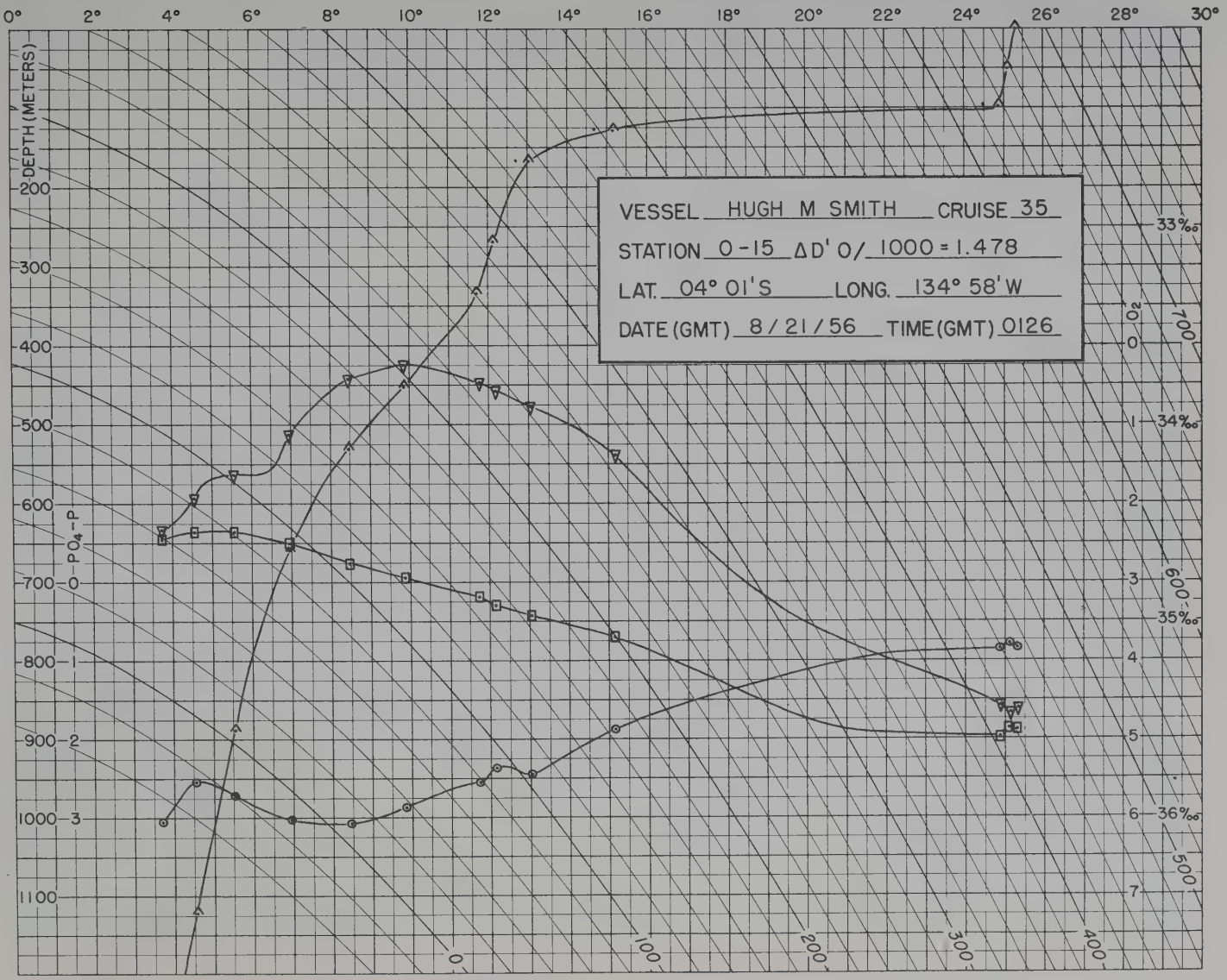

VESSEL HUGH M SMITH CRUISE 35
STATION 0-10 ΔD' O/ 1000 = 1.597
LAT. 06° 09' N LONG. 134° 41' W
DATE(GMT) 8/17/56 TIME(GMT) 0807
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
200 300 400 500 600 700 800 900 1000 1100
0 1 2 3 4 5 6 7
33‰ 34‰ 35‰ 36‰
0 100 200 300 400 500 600 700

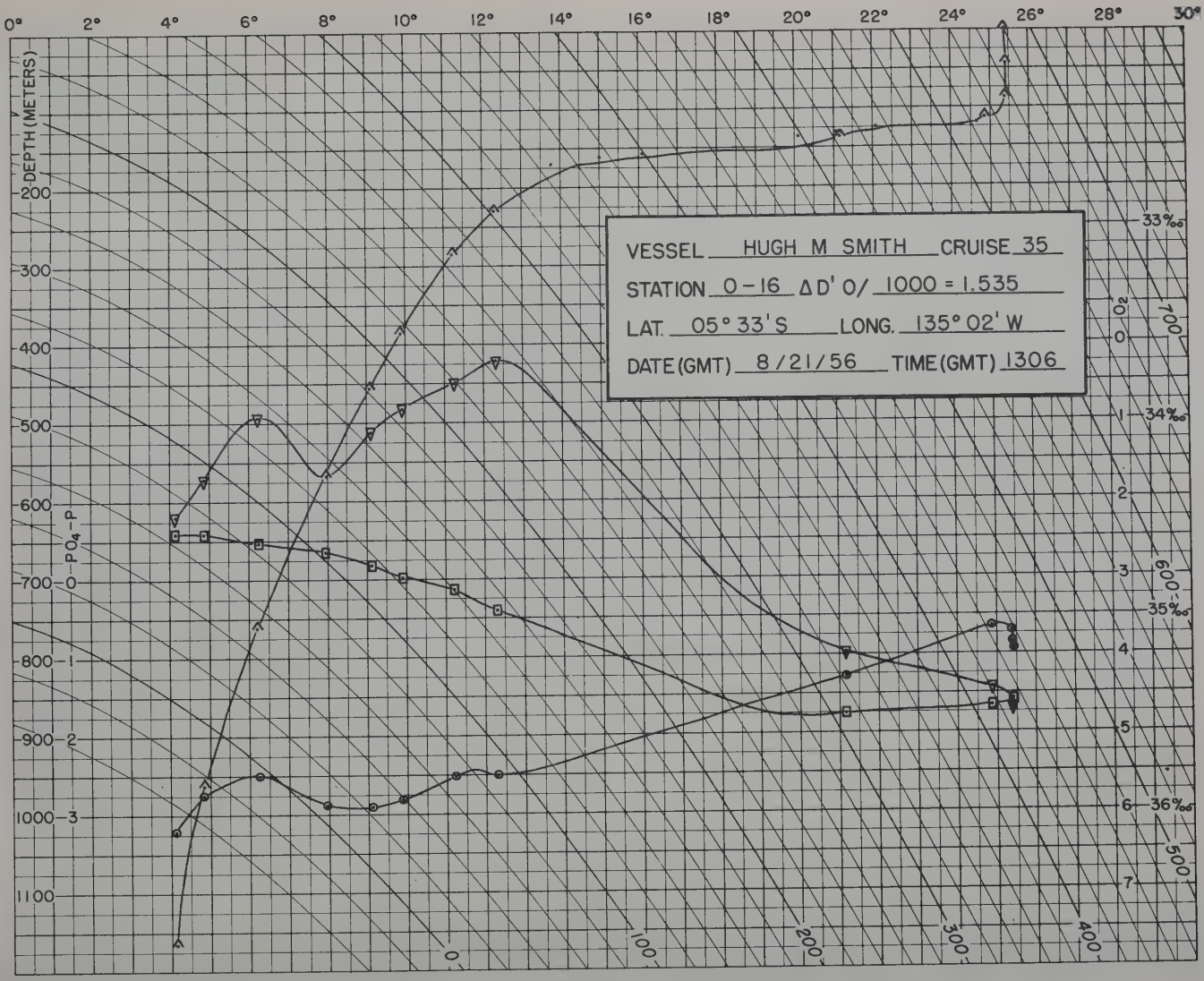

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
VESSEL HUGH M SMITH CRUISE 35
STATION 0-11 ΔD' 0/1000 = 1.544
LAT. 04° 11' N LONG. 135° 05' W
DATE (GMT) 8/18/56 TIME (GMT) 0201
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700

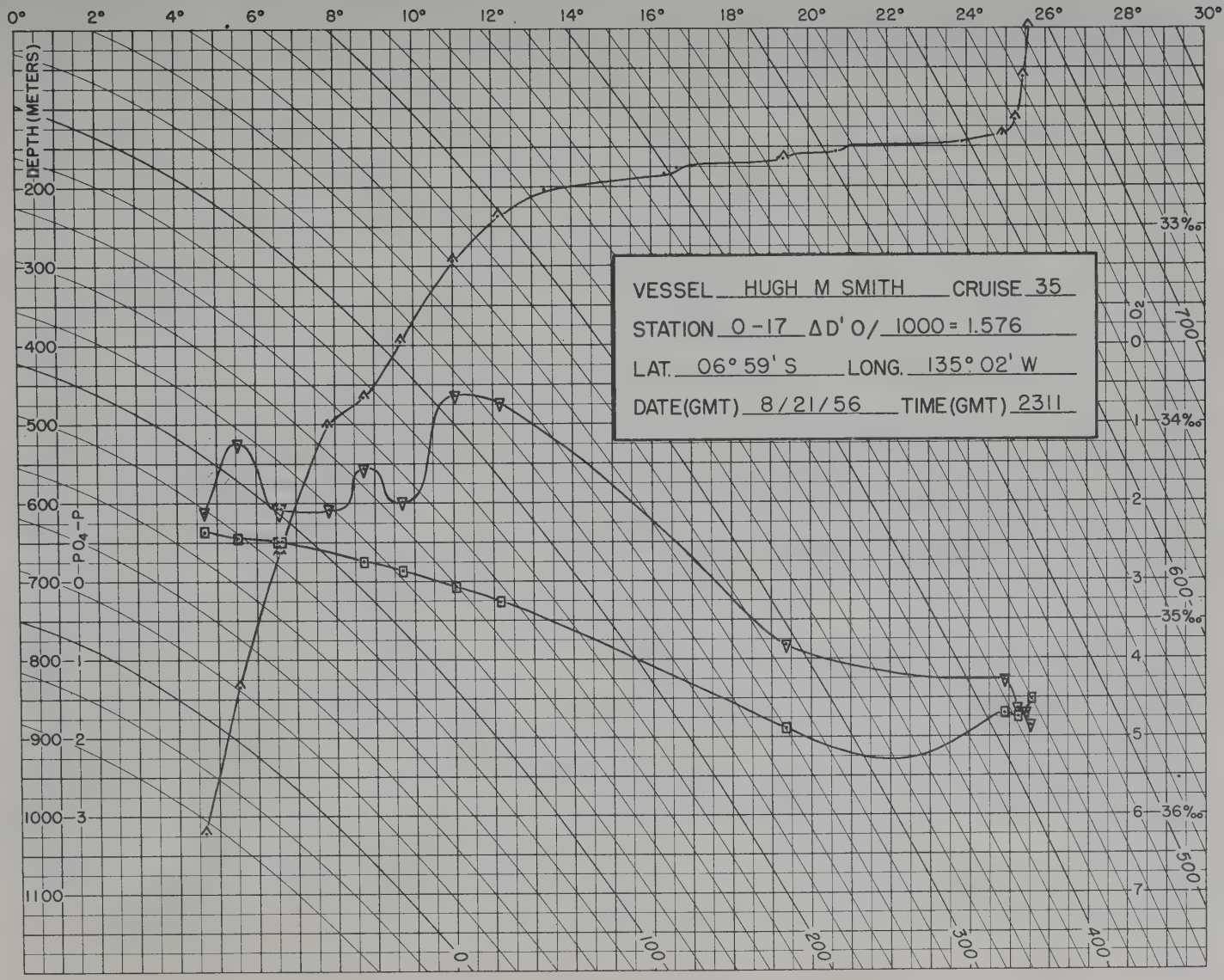

VESSEL HUGH M SMITH CRUISE 35
STATION 0-12 ΔD'O/1000 = 1.549
LAT. 01° 59' N LONG. 135° 12' W
DATE (GMT) 8/19/56 TIME (GMT) 0045
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

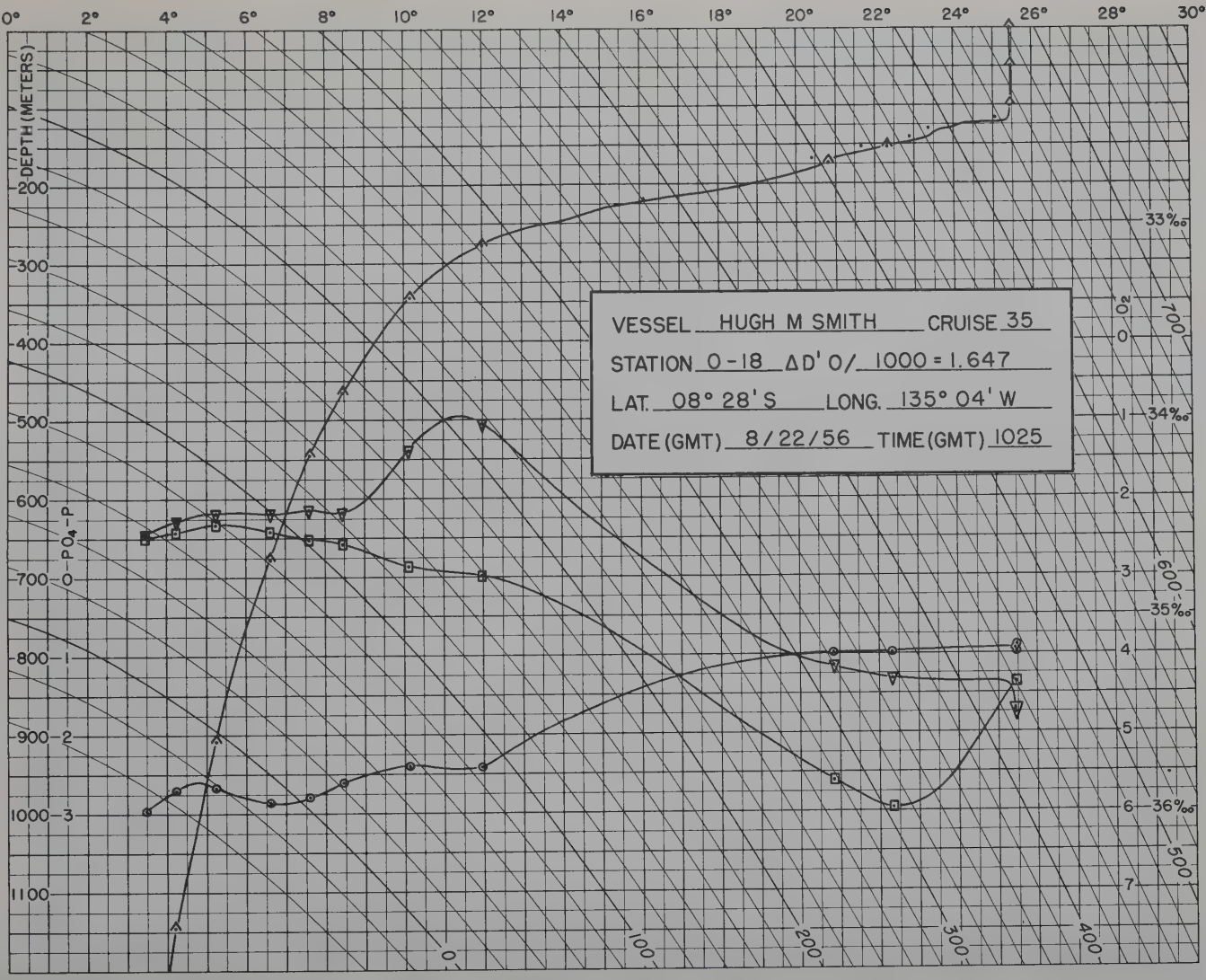

VESSEL HUGH M SMITH CRUISE 35
STATION 0-13 ΔD' O/ 1000 = 1.434
LAT. 00° 04' S LONG. 134° 54' W
DATE (GMT) 8/19/56 TIME (GMT) 1849
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

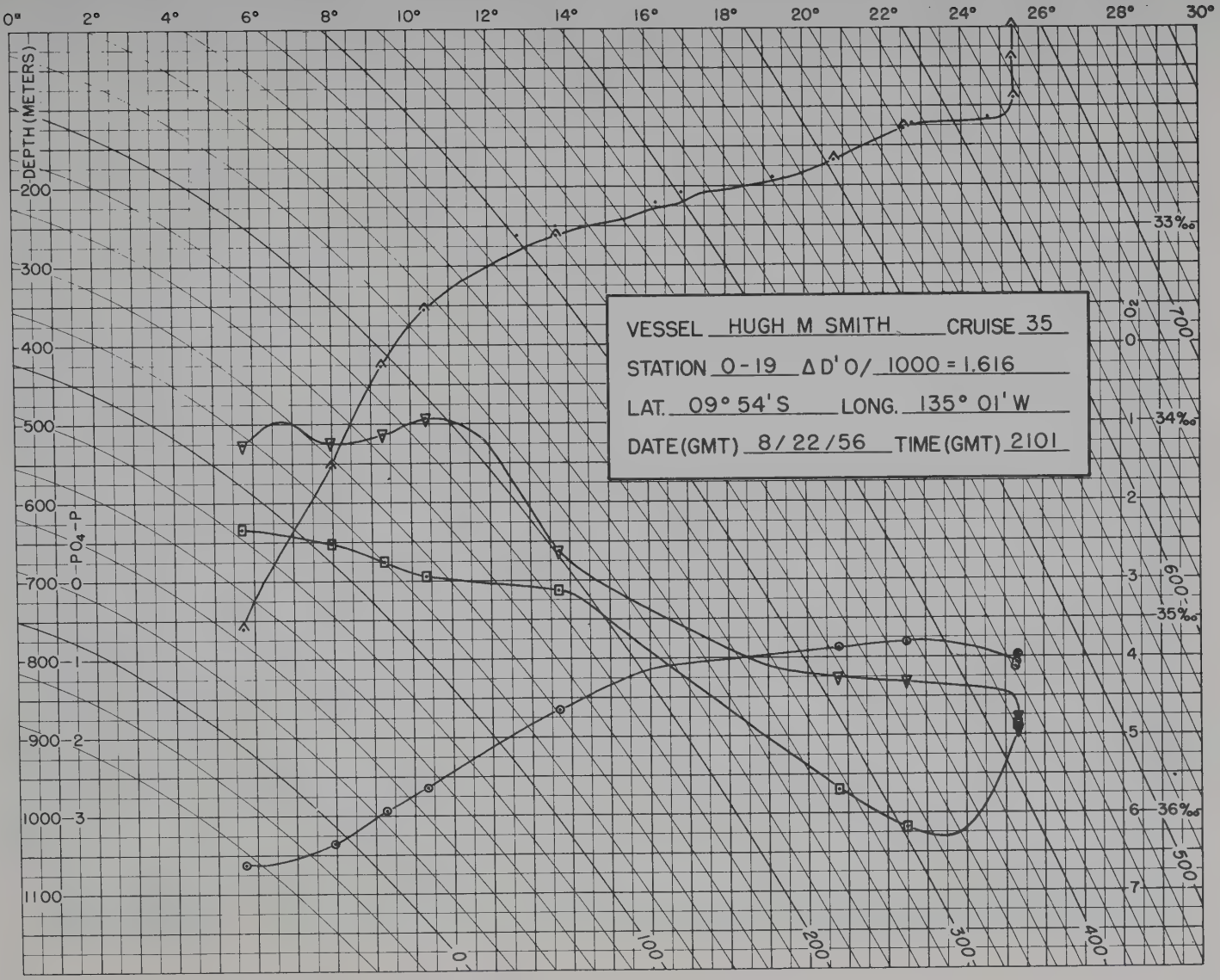

VESSEL HUGH M SMITH CRUISE 35
STATION 0-14 ΔD' O/ 1000 = 1.441
LAT. 02° 14' S LONG. 134° 52' W
DATE(GMT) 8/20/56 TIME(GMT) 1338
DEPTH (METERS)
PO4-P
O2
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

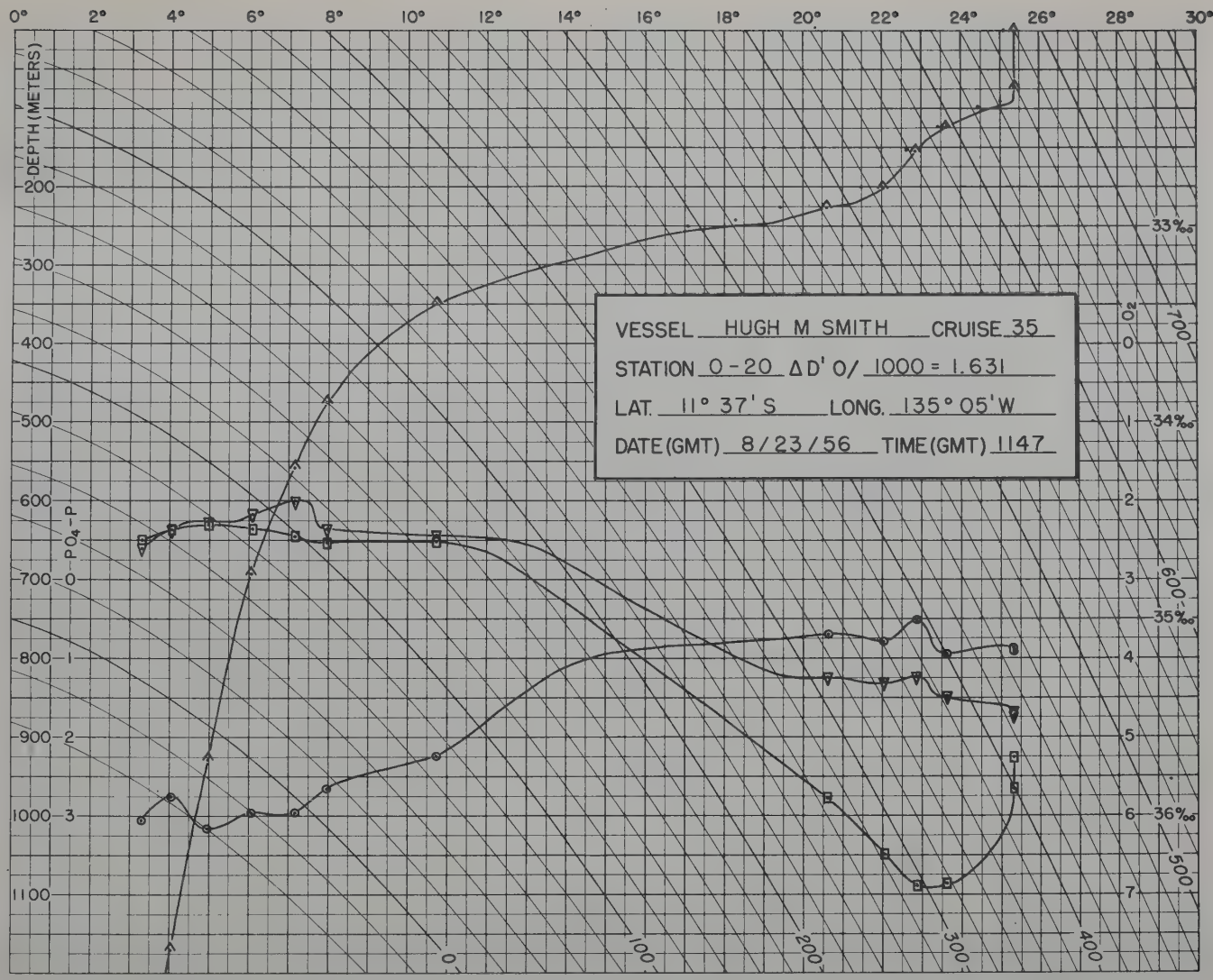

VESSEL HUGH M SMITH CRUISE 35
STATION 0-15 ΔD' O/ 1000 = 1.478
LAT. 04° 01'S LONG. 134° 58'W
DATE (GMT) 8/21/56 TIME (GMT) 0126
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰


VESSEL HUGH M SMITH CRUISE 35
STATION 0-16 ΔD' O/ 1000 = 1.535
LAT. 05° 33' S LONG. 135° 02' W
DATE (GMT) 8/21/56 TIME (GMT) 1306
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

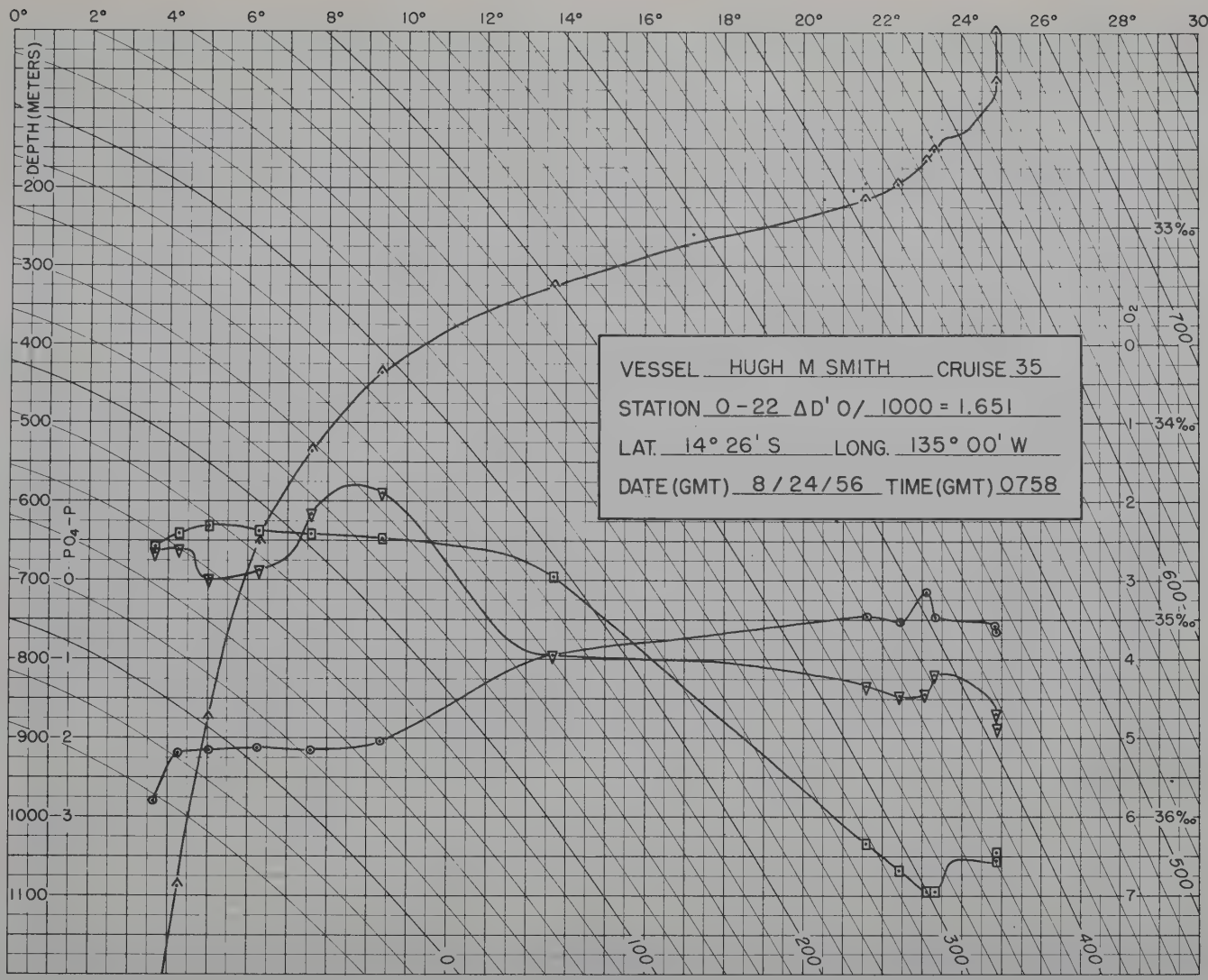

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-17 ΔD' O/ 1000 = 1.576
LAT. 06° 59' S LONG. 135° 02' W
DATE(GMT) 8/21/56 TIME(GMT) 2311

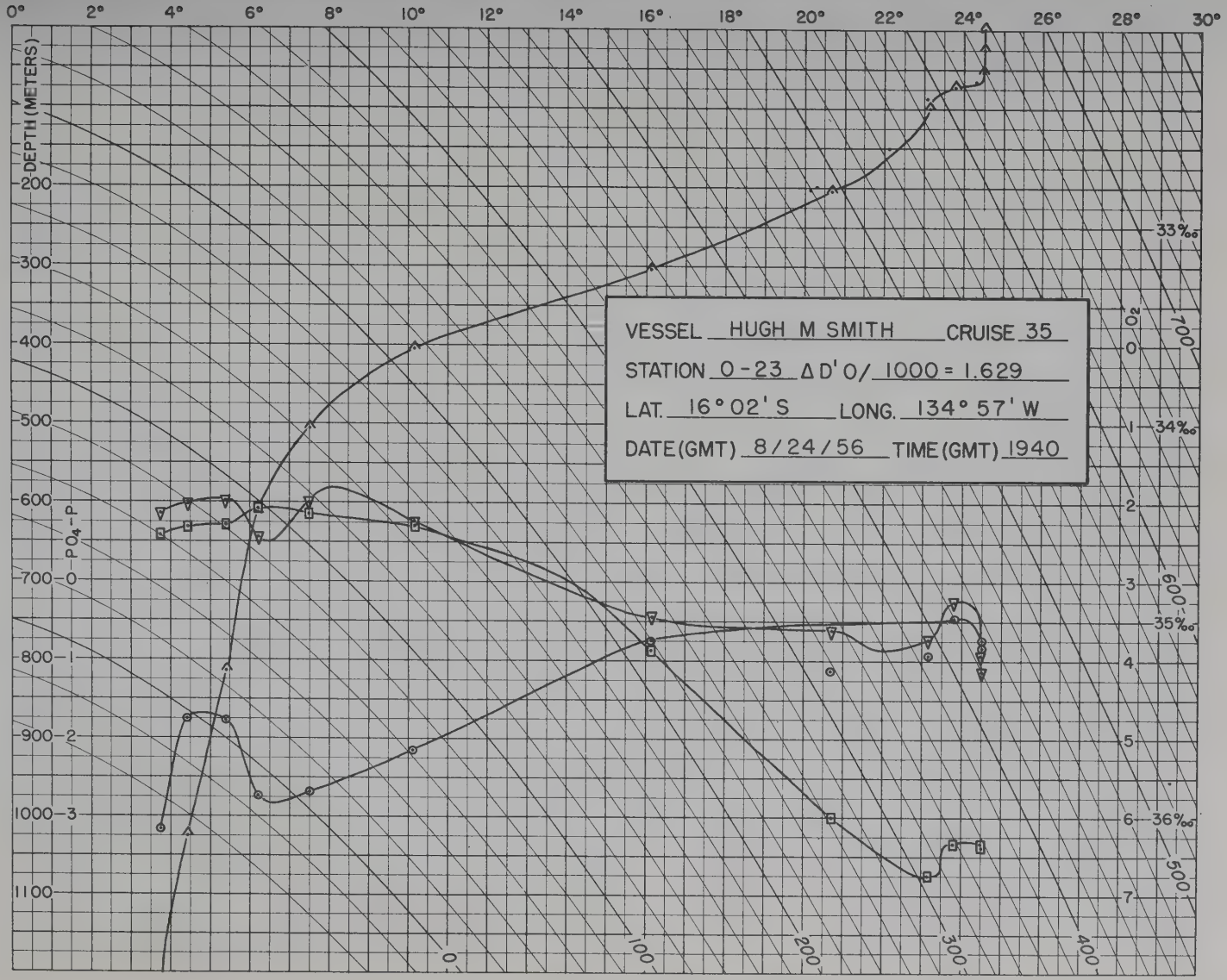

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
-PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-18 ΔD' O/ 1000 = 1.647
LAT. 08° 28' S LONG. 135° 04' W
DATE (GMT) 8/22/56 TIME (GMT) 1025

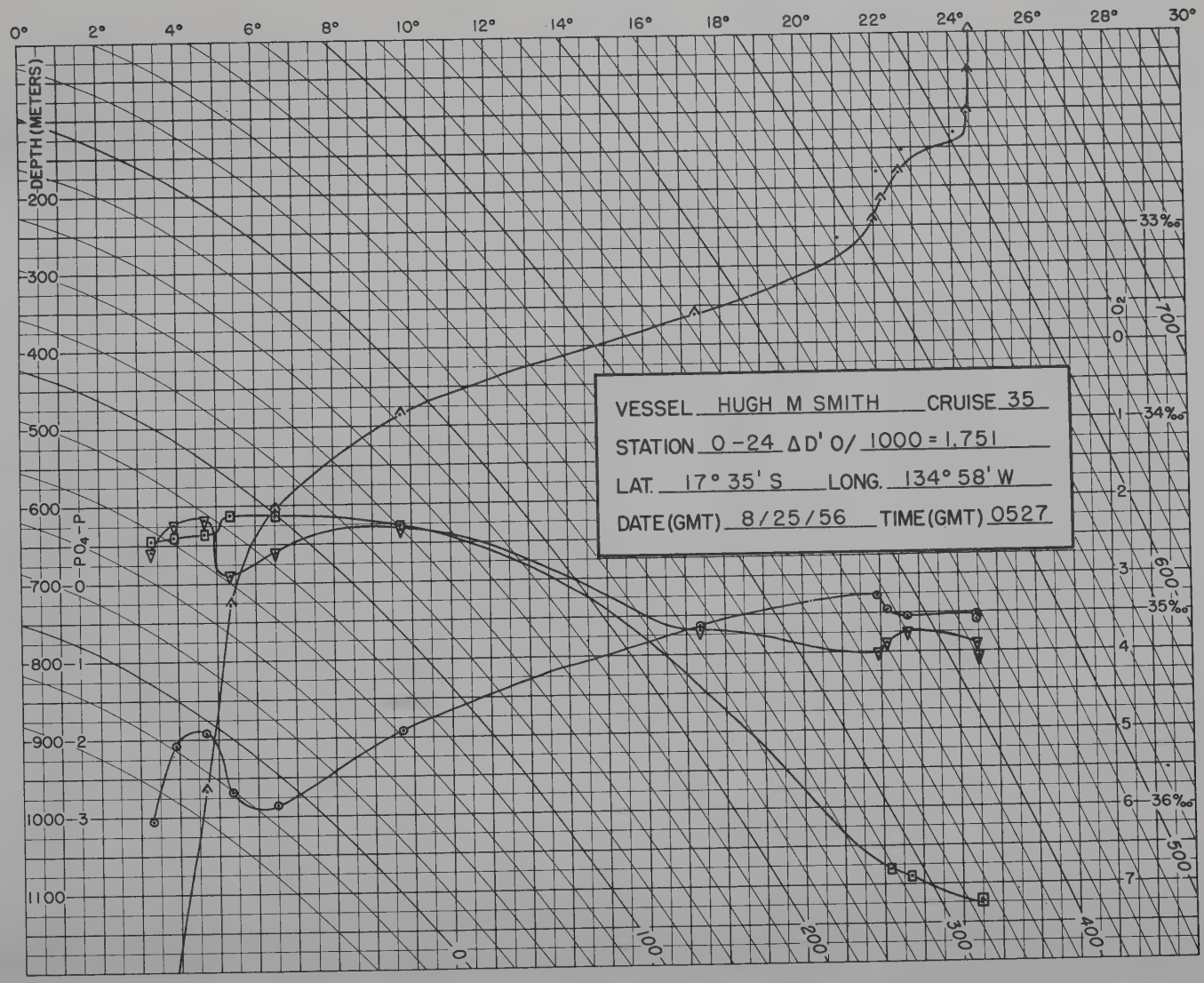

VESSEL HUGH M SMITH CRUISE 35
STATION 0-19 ΔD'O/1000 = 1.616
LAT. 09° 54' S LONG. 135° 01' W
DATE(GMT) 8/22/56 TIME(GMT) 2101
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

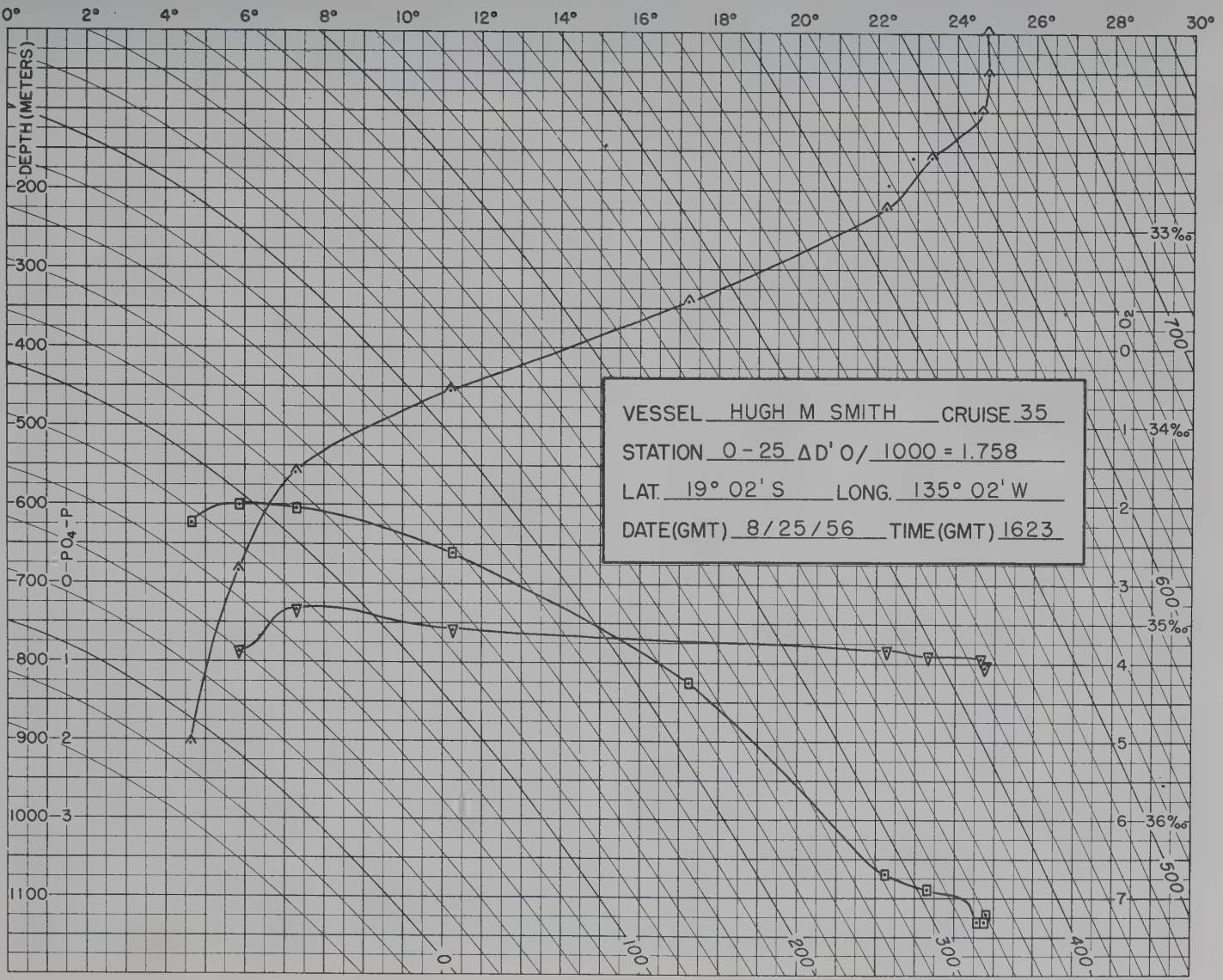

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-20 ΔD' 0/1000 = 1.631
LAT. 11° 37' S LONG. 135° 05' W
DATE (GMT) 8/23/56 TIME (GMT) 1147

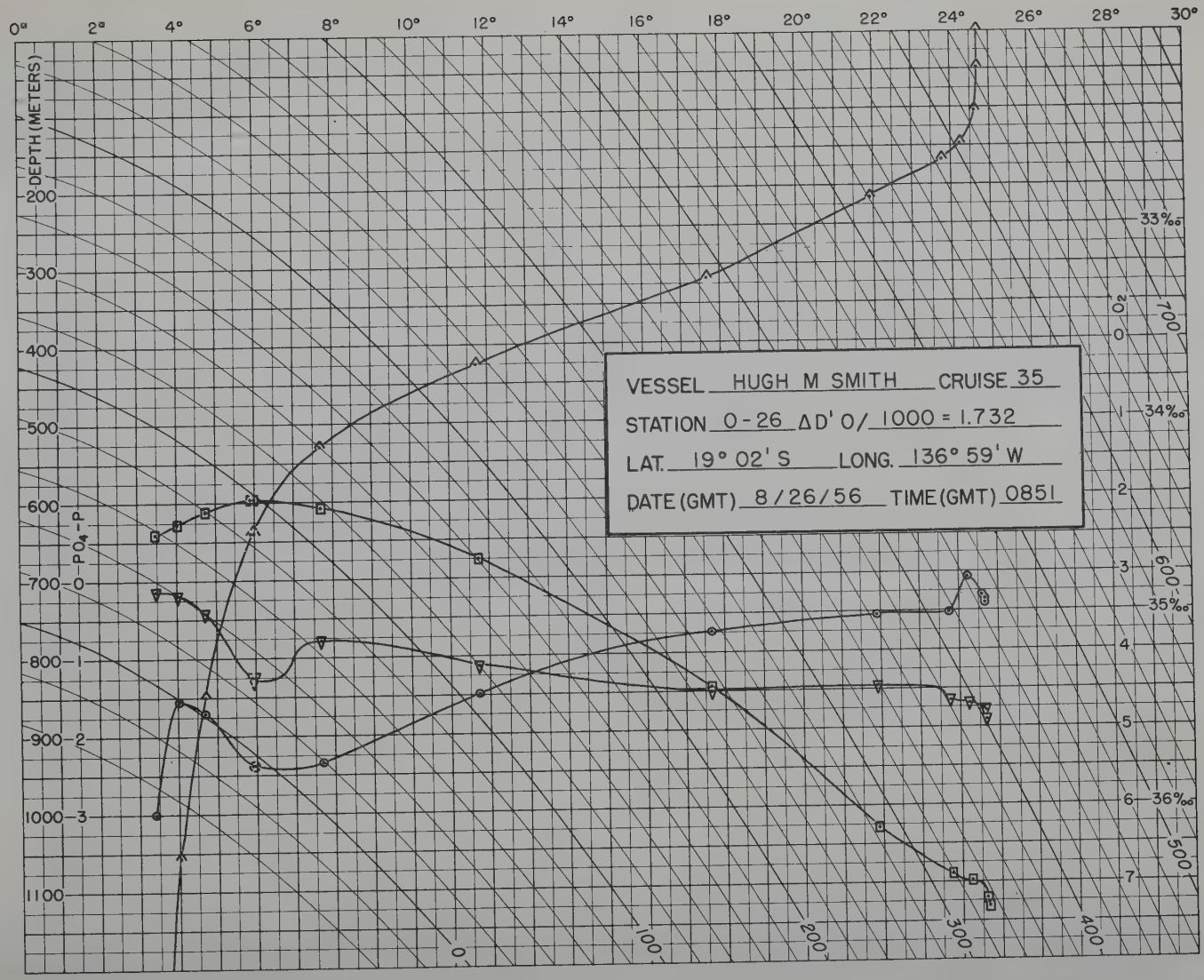
VESSEL HUGH M SMITH CRUISE 35
STATION 0-21 ΔD' O/ 1000 = 1.626
LAT. 12° 58' S LONG. 134° 58' W
DATE(GMT) 8/23/56 TIME(GMT) 2125
DEPTH (METERS)
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰ 34‰ 35‰ 36‰
700 600 500 400 300 200 100 0
0 1 2 3 4 5 6 7
100 200 300 400 500 600 700 800 900 1000 1100
0 1 2 3
P0-P

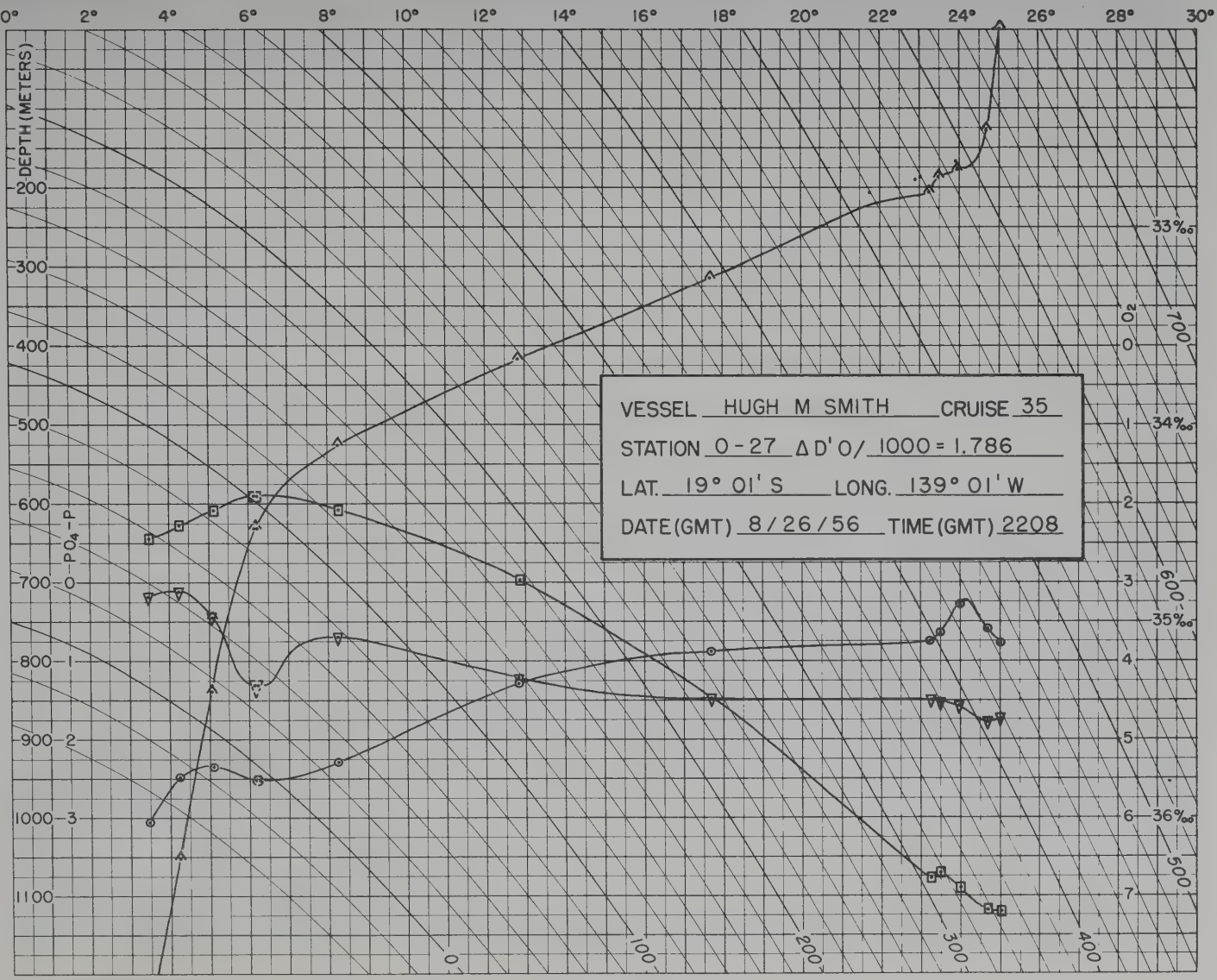

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
33‰
34‰
35‰
36‰
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-22 ΔD' 0/1000 = 1.651
LAT. 14° 26' S LONG. 135° 00' W
DATE (GMT) 8/24/56 TIME (GMT) 0758

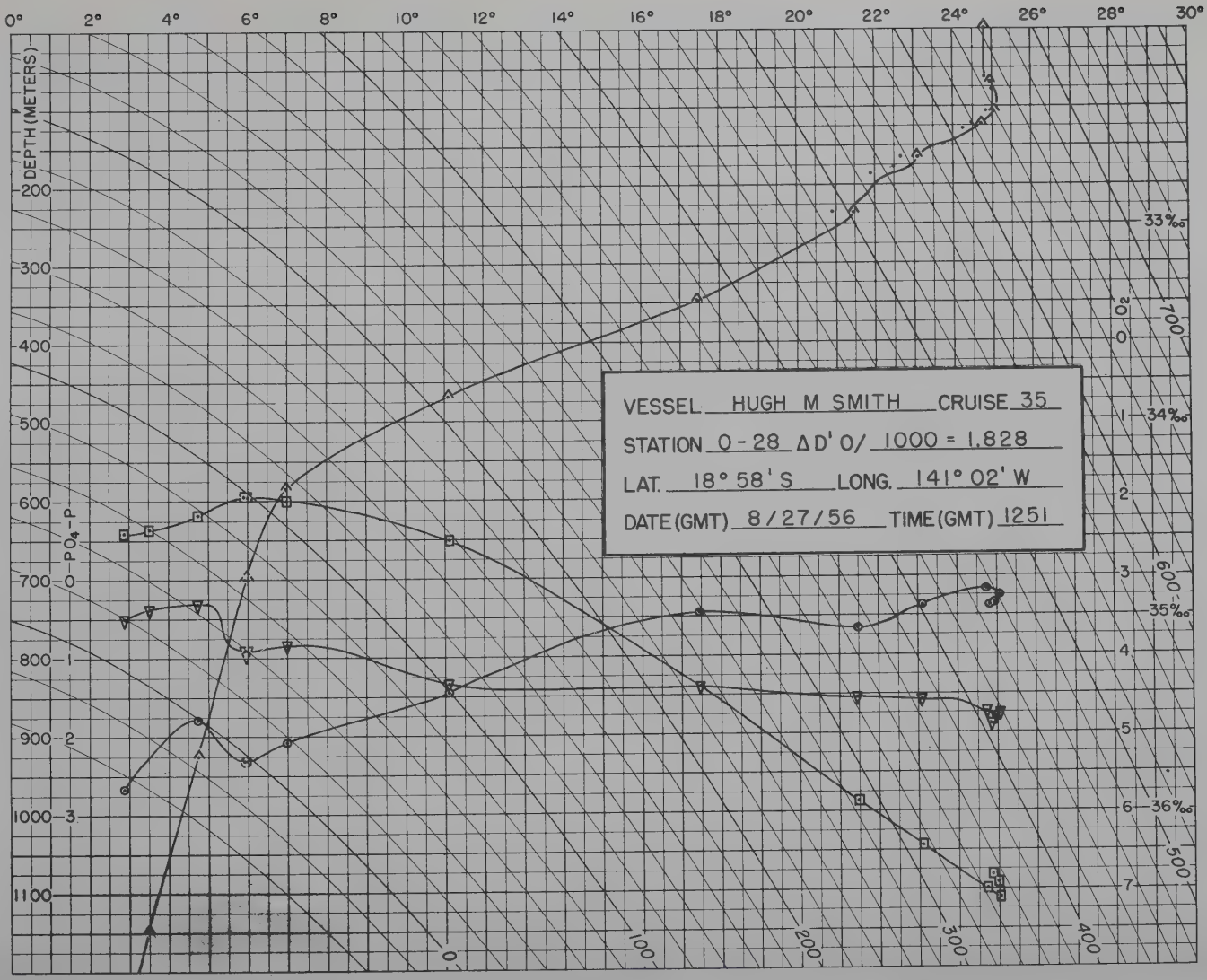

VESSEL HUGH M SMITH CRUISE 35
STATION 0-23 Δ D' O/ 1000 = 1.629
LAT. 16° 02' S LONG. 134° 57' W
DATE (GMT) 8/24/56 TIME (GMT) 1940
DEPTH (METERS)
PO4-P
O2
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

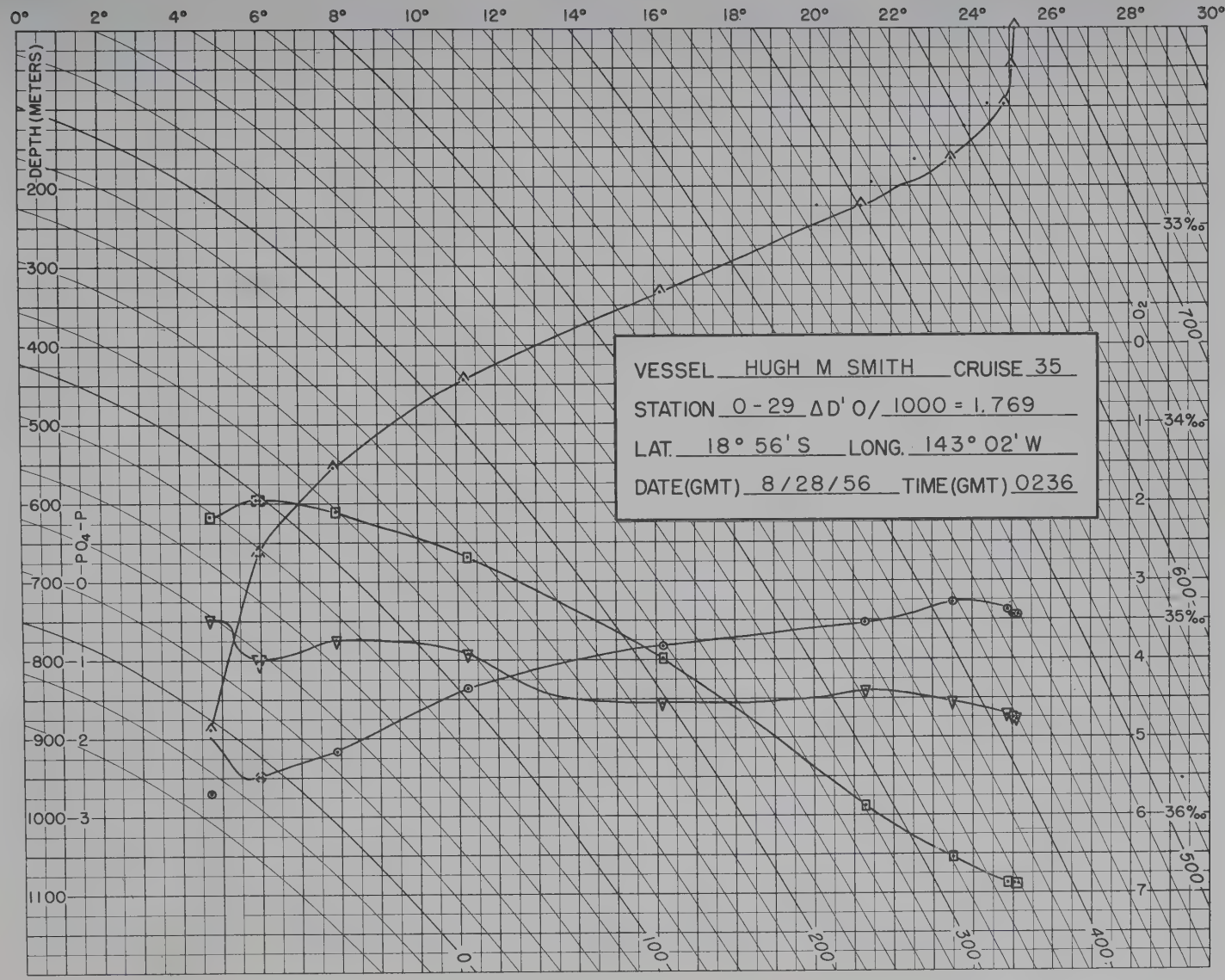

VESSEL HUGH M SMITH CRUISE 35
STATION 0-24 ΔD' O/ 1000 = 1.751
LAT. 17° 35' S LONG. 134° 58' W
DATE (GMT) 8/25/56 TIME (GMT) 0527
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

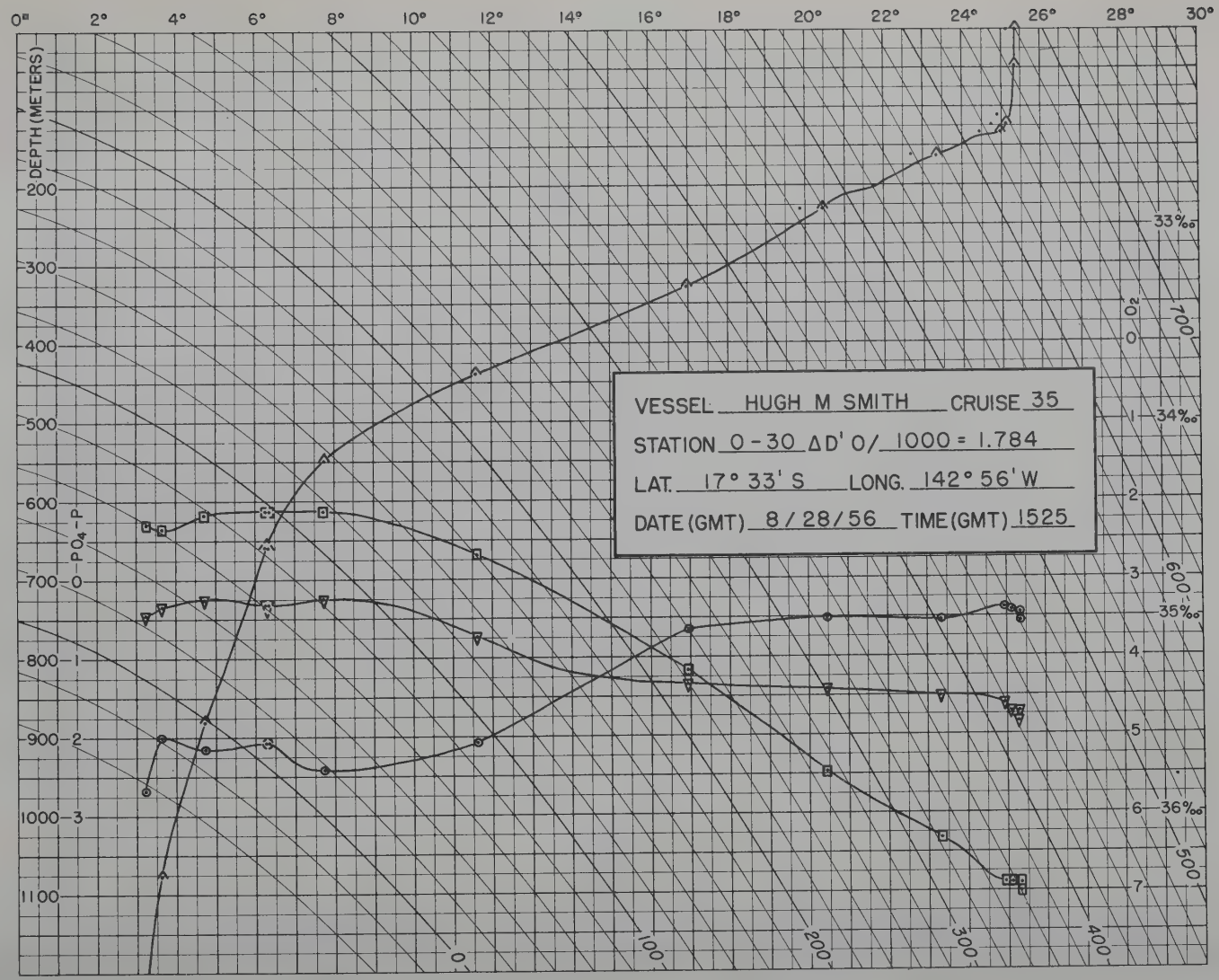

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
O2
0
1
2
3
4
5
6
7
600
500
0
100
200
300
400
VESSEL HUGH M SMITH CRUISE 35
STATION 0-25 ΔD' O/ 1000 = 1.758
LAT. 19° 02' S LONG. 135° 02' W
DATE(GMT) 8/25/56 TIME(GMT) 1623

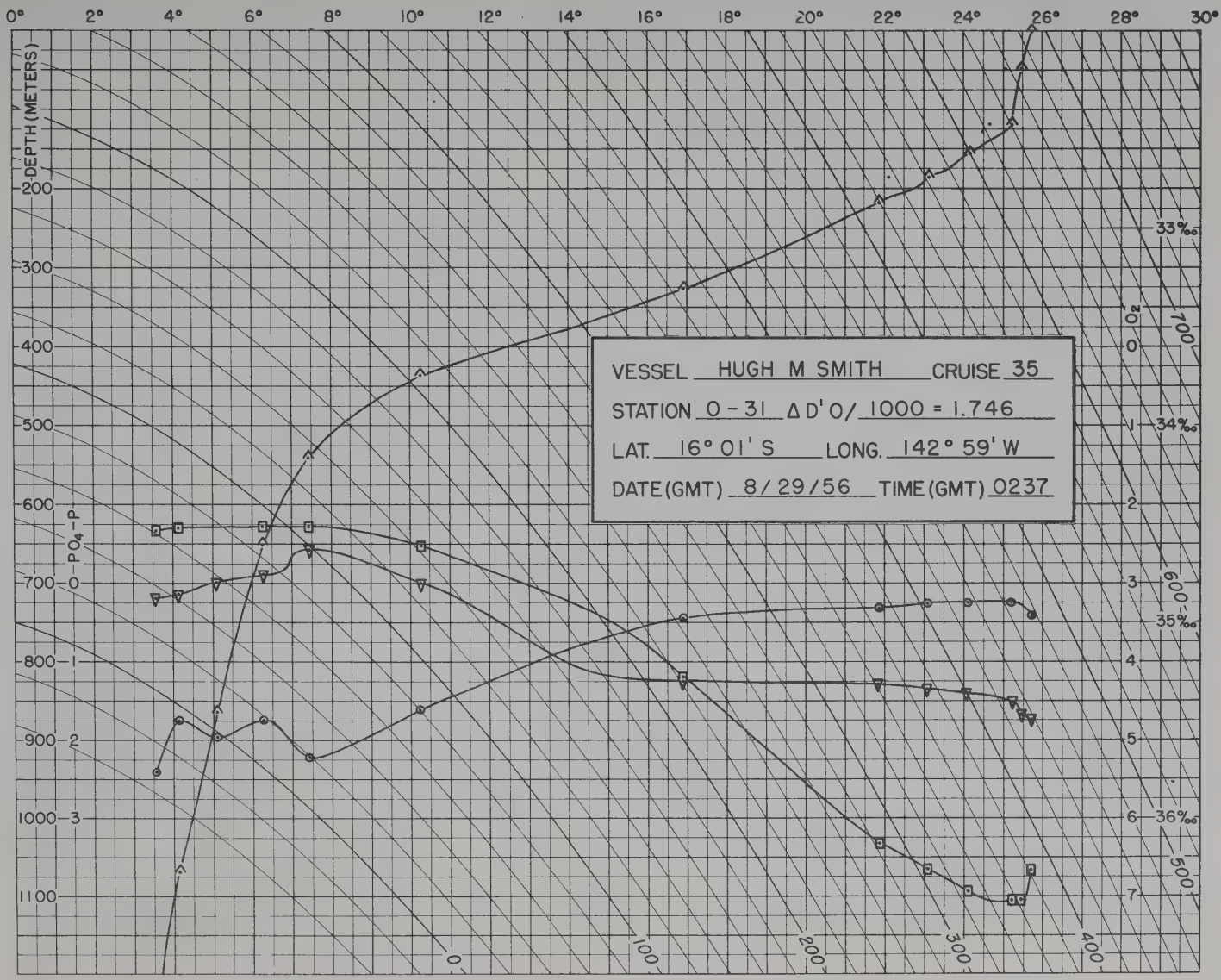

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
P-PO4-P
0
1
2
VESSEL HUGH M SMITH CRUISE 35
STATION 0-26 ΔD' 0/1000 = 1.732
LAT. 19° 02' S LONG. 136° 59' W
DATE (GMT) 8/26/56 TIME (GMT) 0851
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
3
4
5
6
7

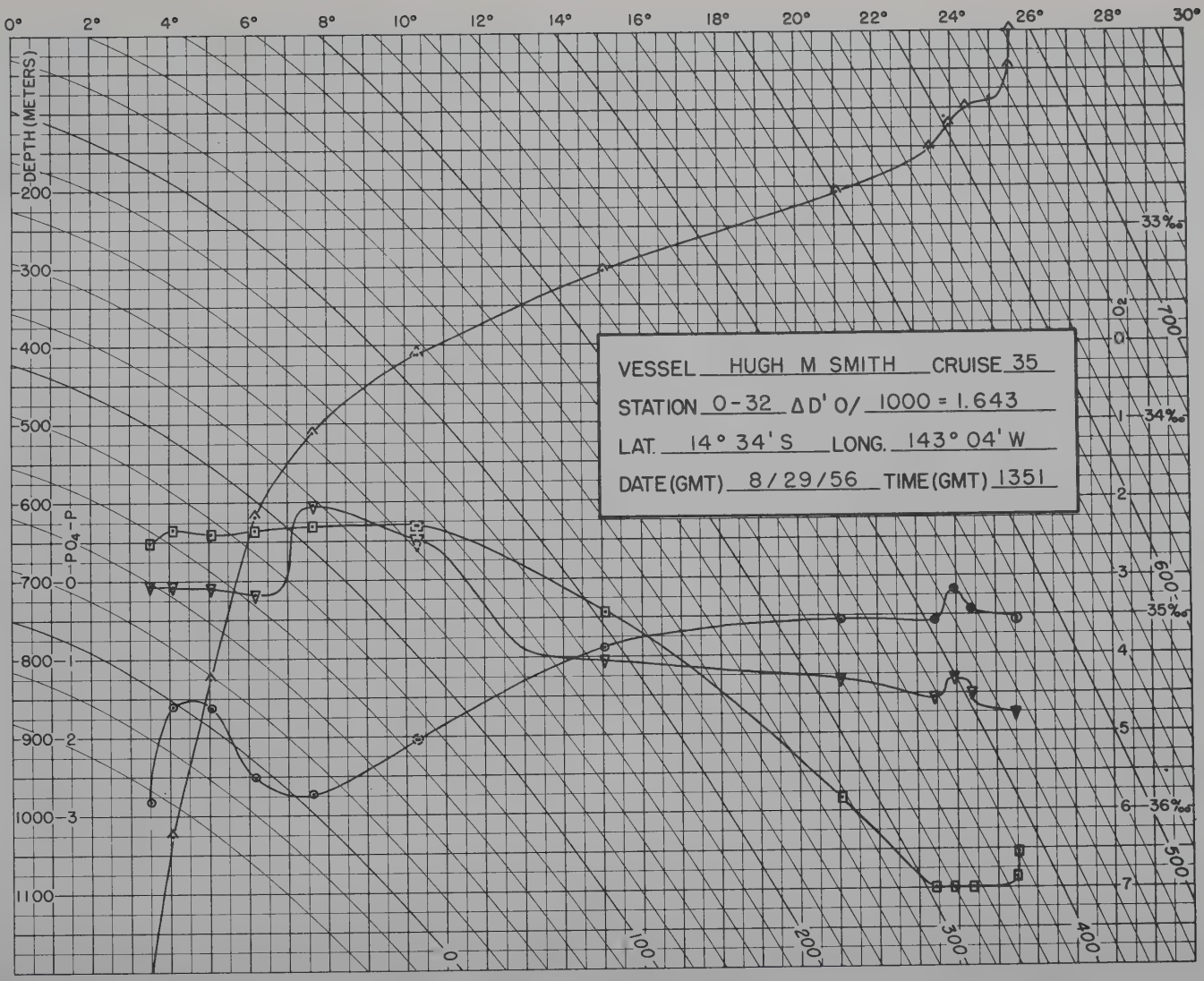

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-27 ΔD'O/1000 = 1.786
LAT. 19° 01' S LONG. 139° 01' W
DATE (GMT) 8/26/56 TIME (GMT) 2208
0
100
200
300
400
500
600
700

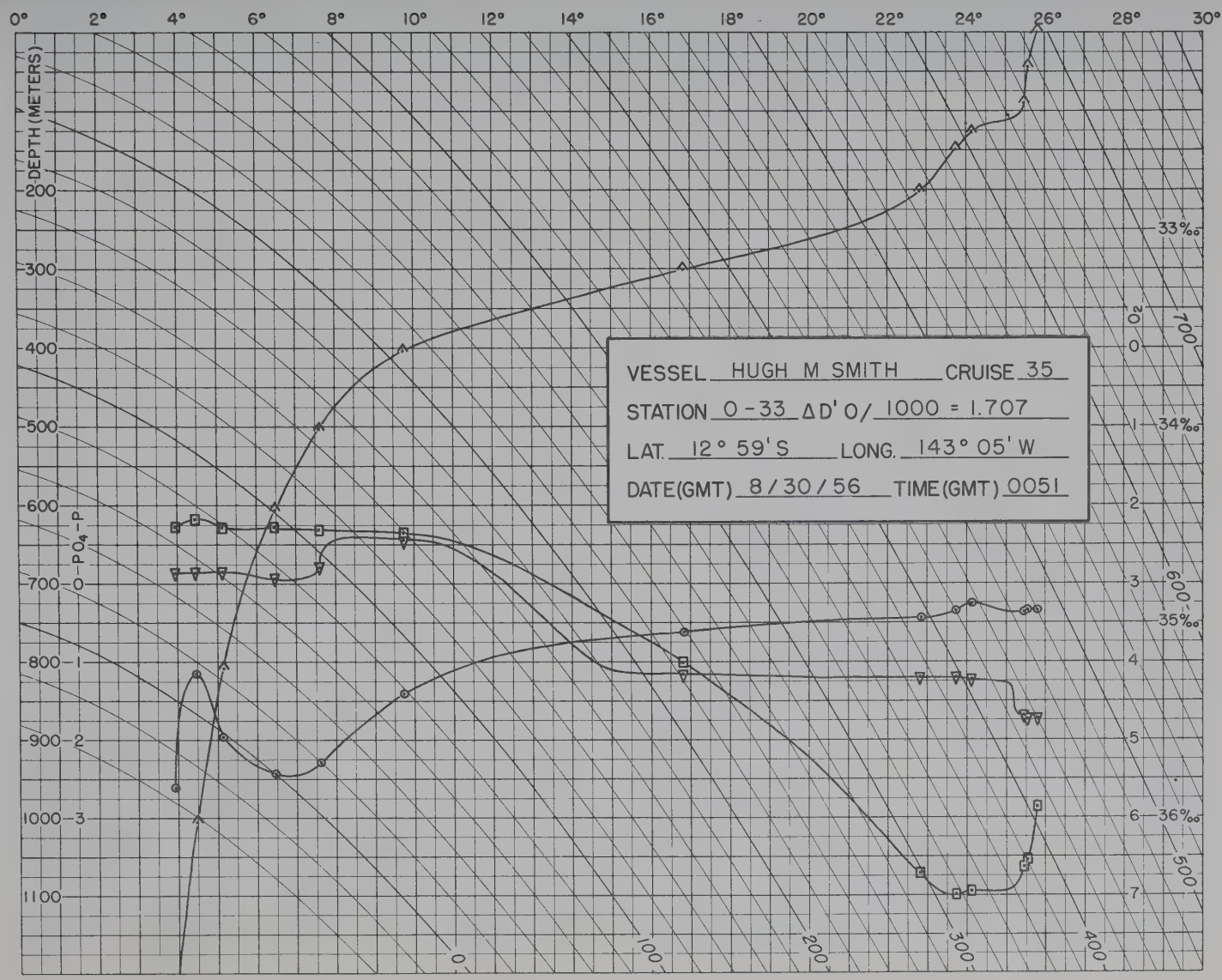

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL: HUGH M SMITH CRUISE 35
STATION 0-28 ΔD' 0/ 1000 = 1.828
LAT. 18° 58' S LONG. 141° 02' W
DATE (GMT) 8/27/56 TIME (GMT) 1251

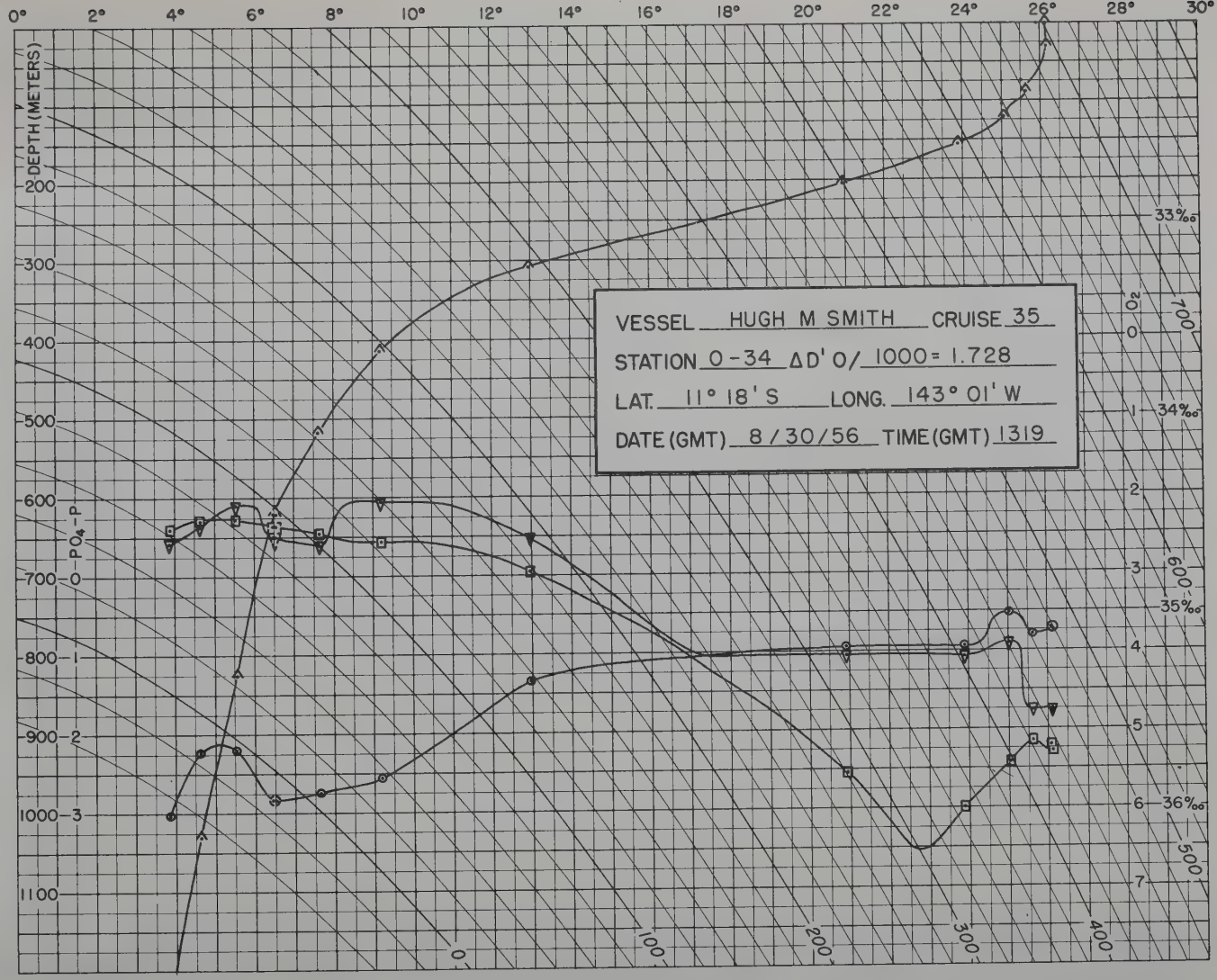

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
dynamic depth
0
1
2
3
4
5
6
7
33‰
34‰
35‰
36‰
700
600
500
400
300
200
100
0
VESSEL HUGH M SMITH CRUISE 35
STATION 0-29 ΔD' 0/1000 = 1.769
LAT. 18° 56' S LONG. 143° 02' W
DATE(GMT) 8/28/56 TIME(GMT) 0236

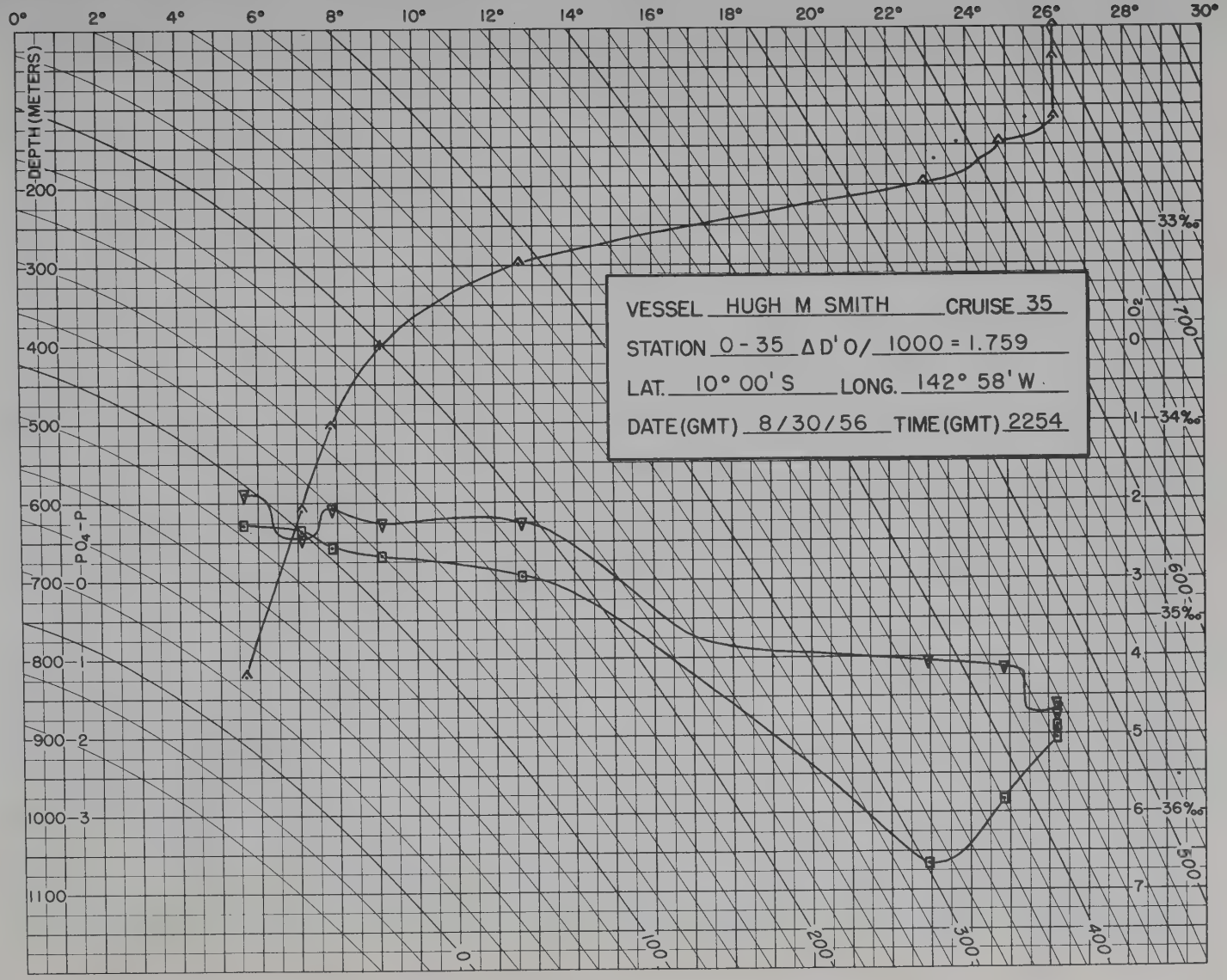

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-30 ΔD' O/ 1000 = 1.784
LAT. 17° 33' S LONG. 142° 56' W
DATE (GMT) 8/28/56 TIME (GMT) 1525

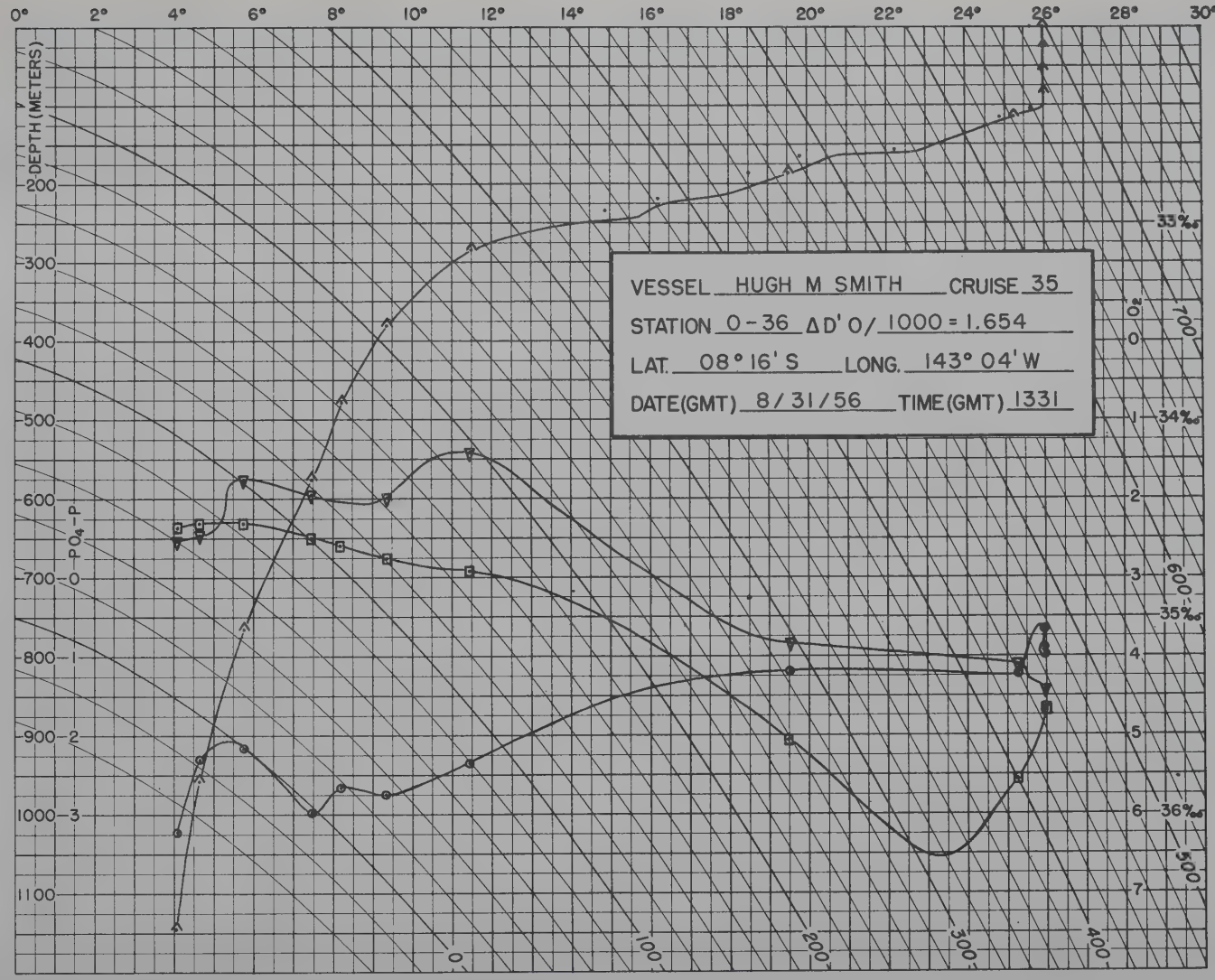

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-31 ΔD' 0/1000 = 1.746
LAT. 16° 01' S LONG. 142° 59' W
DATE (GMT) 8/29/56 TIME (GMT) 0237

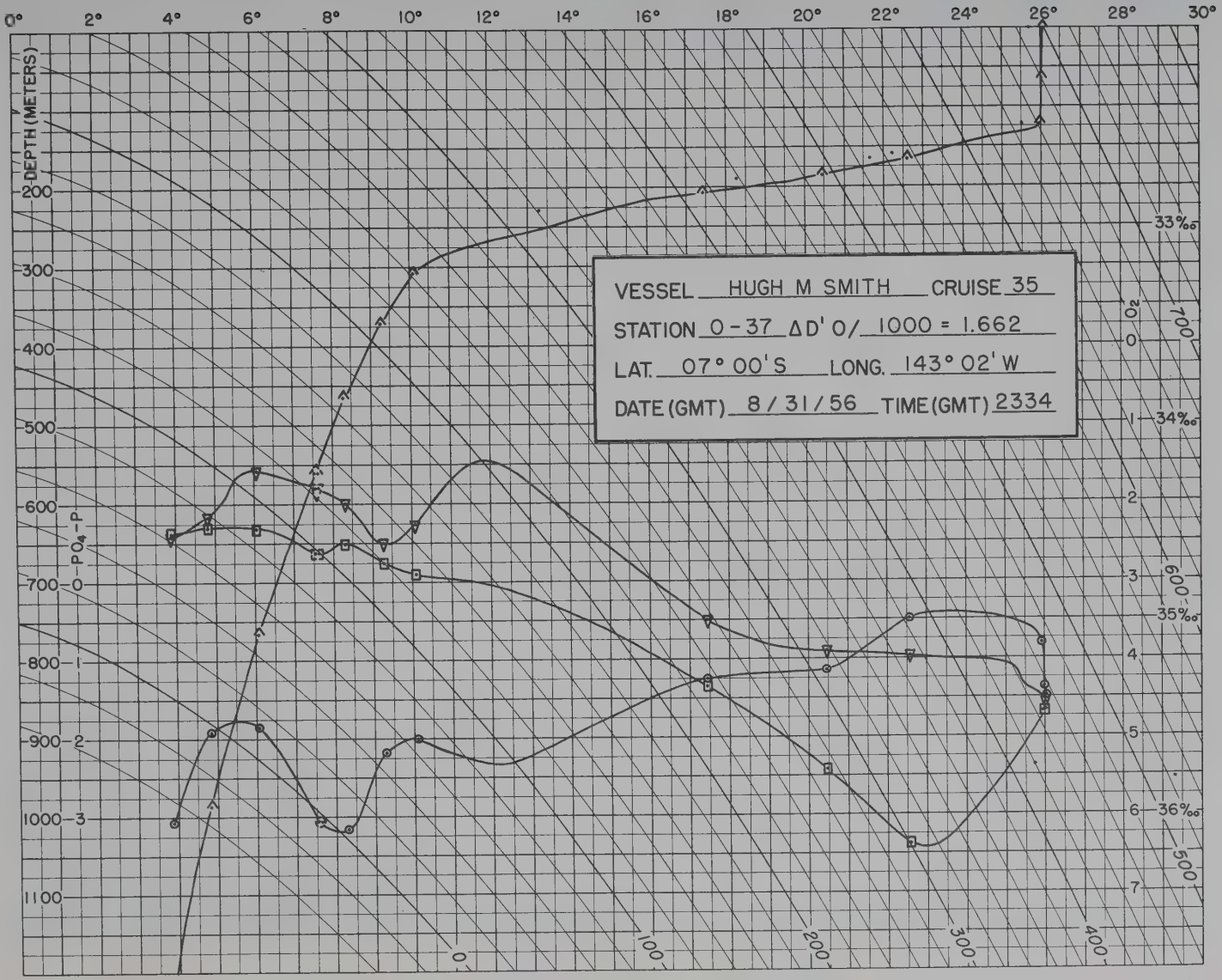

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
33‰
34‰
35‰
36‰
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-32 ΔD' O/ 1000 = 1.643
LAT. 14° 34' S LONG. 143° 04' W
DATE (GMT) 8/29/56 TIME (GMT) 1351

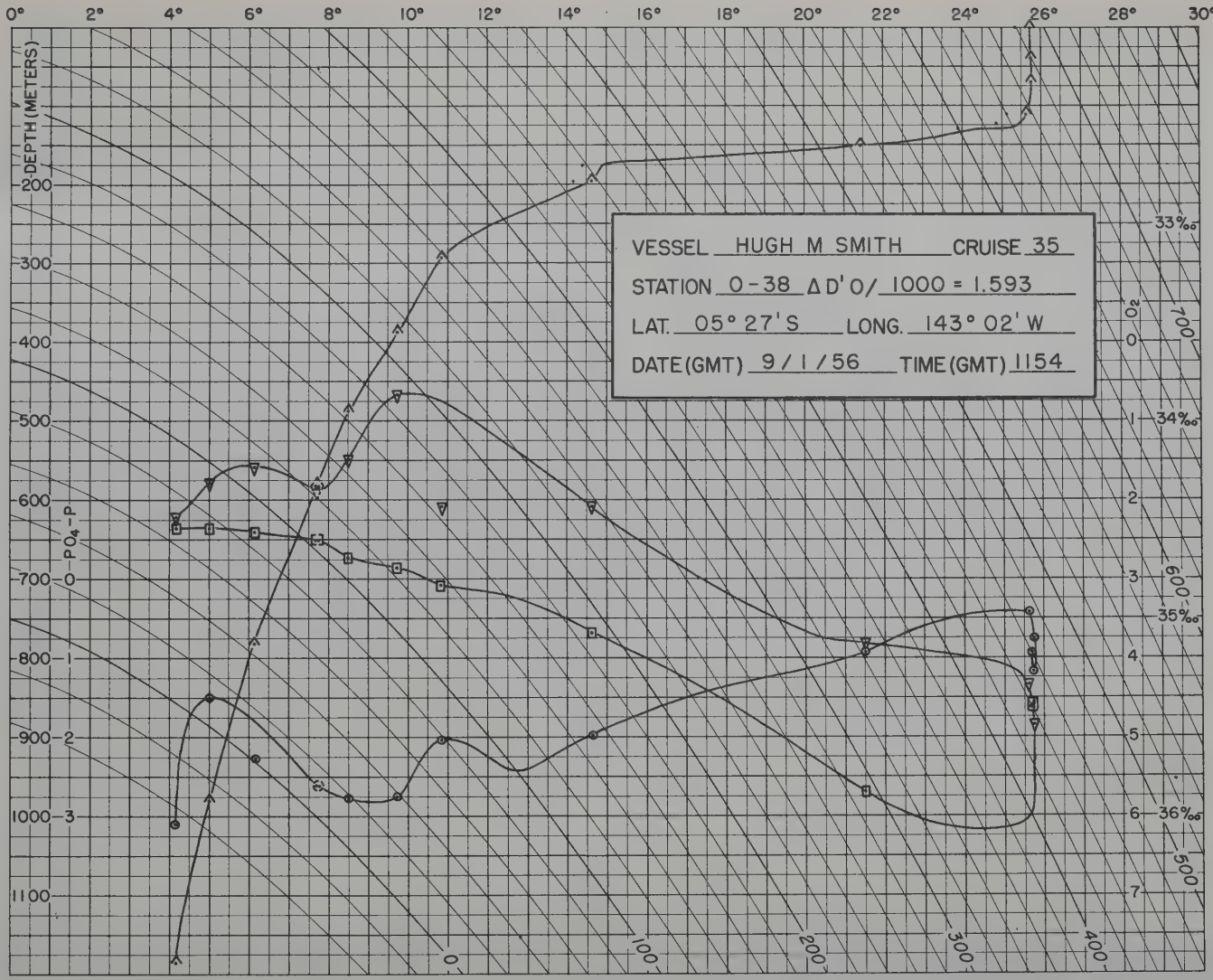

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-33 ΔD' O/ 1000 = 1.707
LAT. 12° 59' S LONG. 143° 05' W
DATE(GMT) 8/30/56 TIME(GMT) 0051
0
100
200
300
400
500
600
700

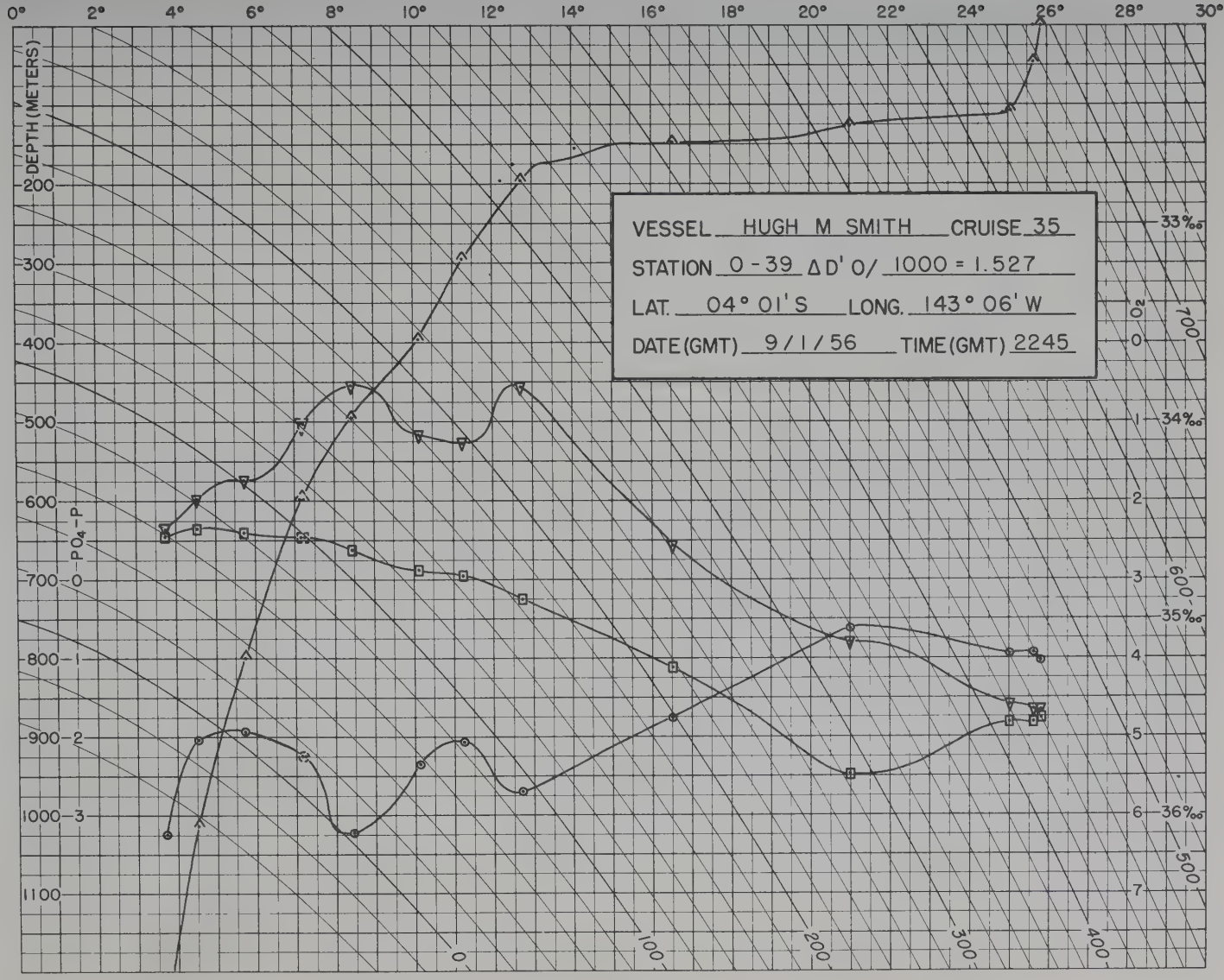

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
100
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
700
600
500
0
100
200
300
400
VESSEL HUGH M SMITH CRUISE 35
STATION 0-34 ΔD' O/ 1000 = 1.728
LAT. 11° 18' S LONG. 143° 01' W
DATE (GMT) 8/30/56 TIME (GMT) 1319

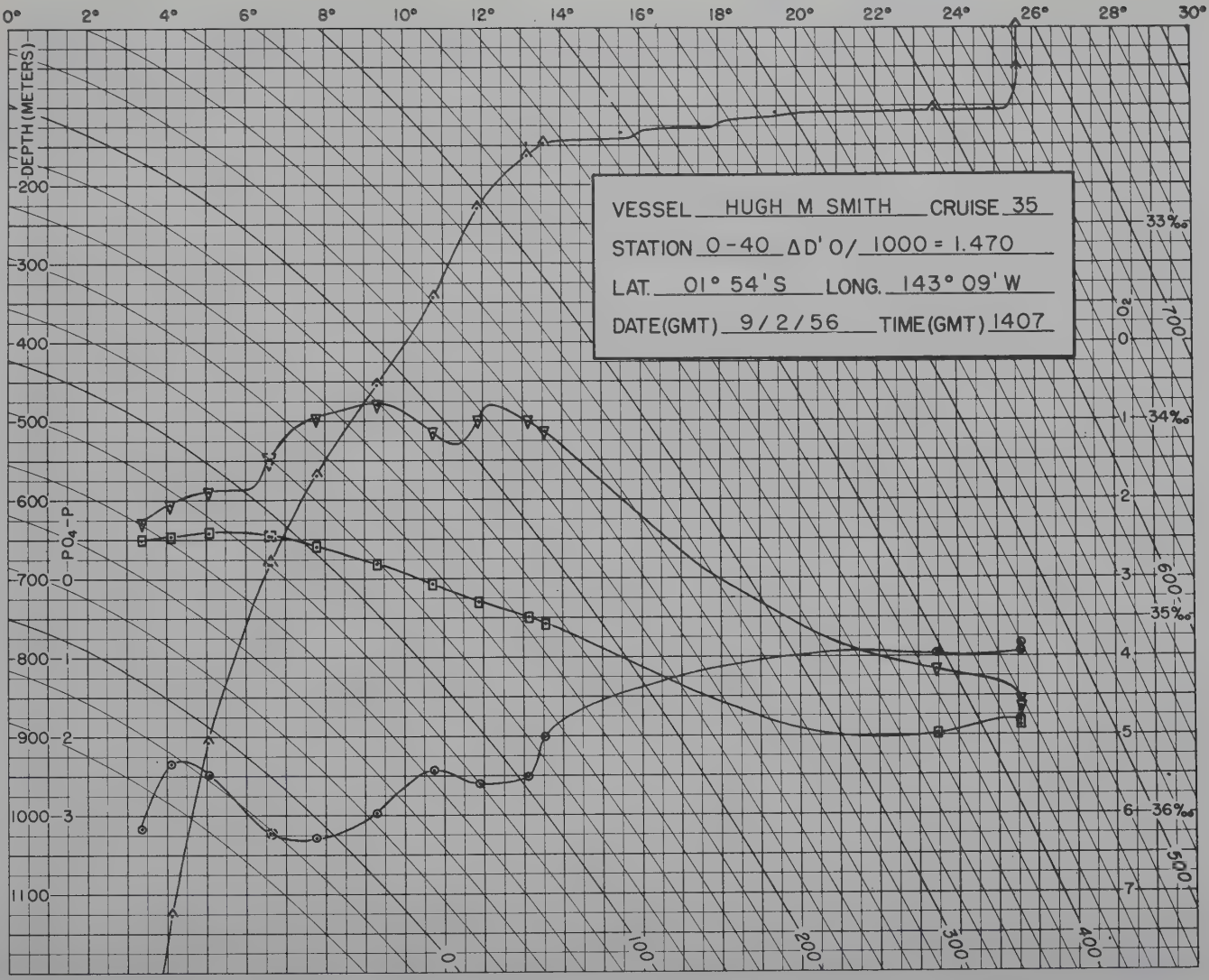

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
O2
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-35 Δ D' O/ 1000 = 1.759
LAT. 10° 00' S LONG. 142° 58' W
DATE (GMT) 8/30/56 TIME (GMT) 2254

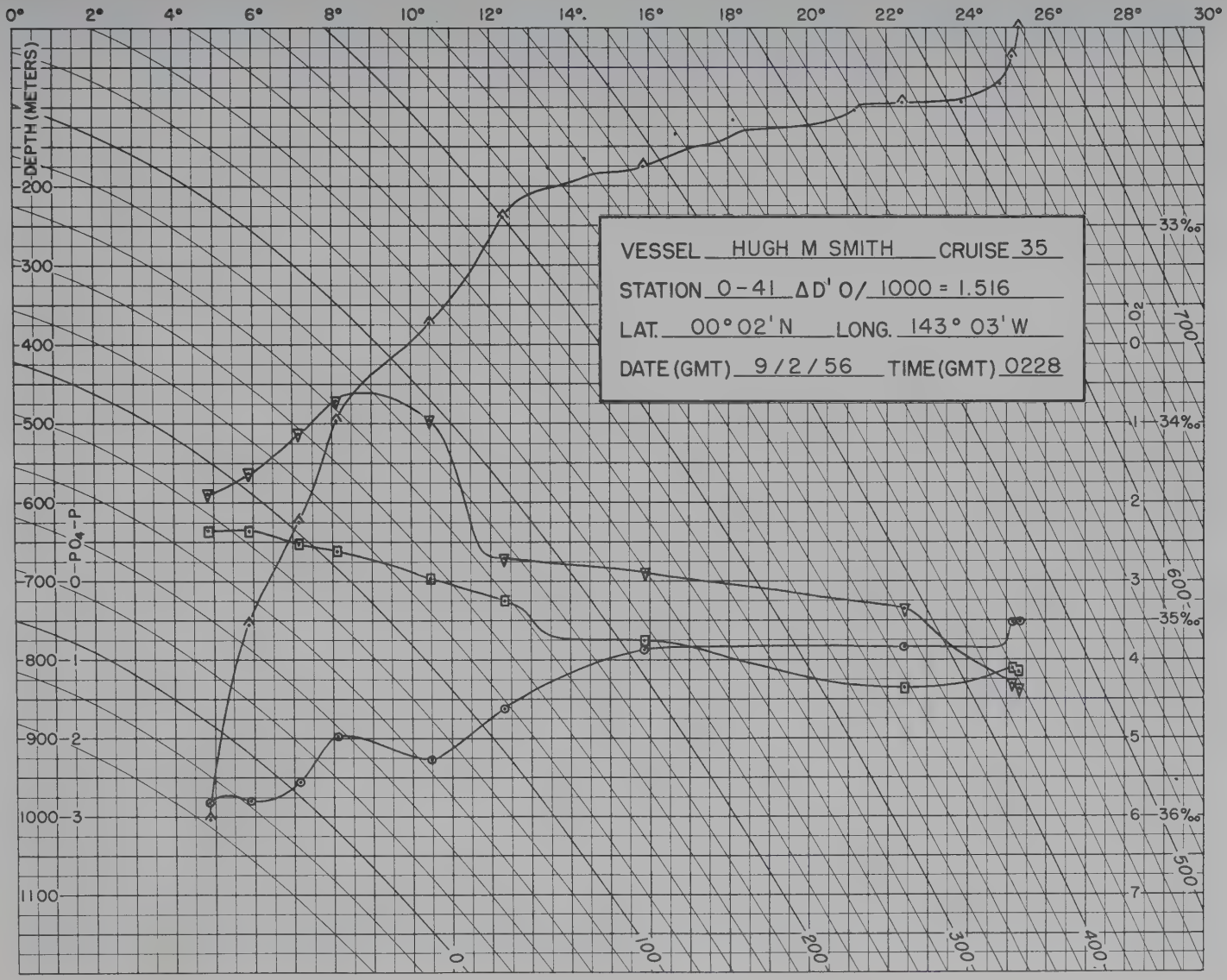

VESSEL HUGH M SMITH CRUISE 35
STATION 0-36 ΔD' O/ 1000 = 1.654
LAT. 08° 16' S LONG. 143° 04' W
DATE(GMT) 8/31/56 TIME(GMT) 1331
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

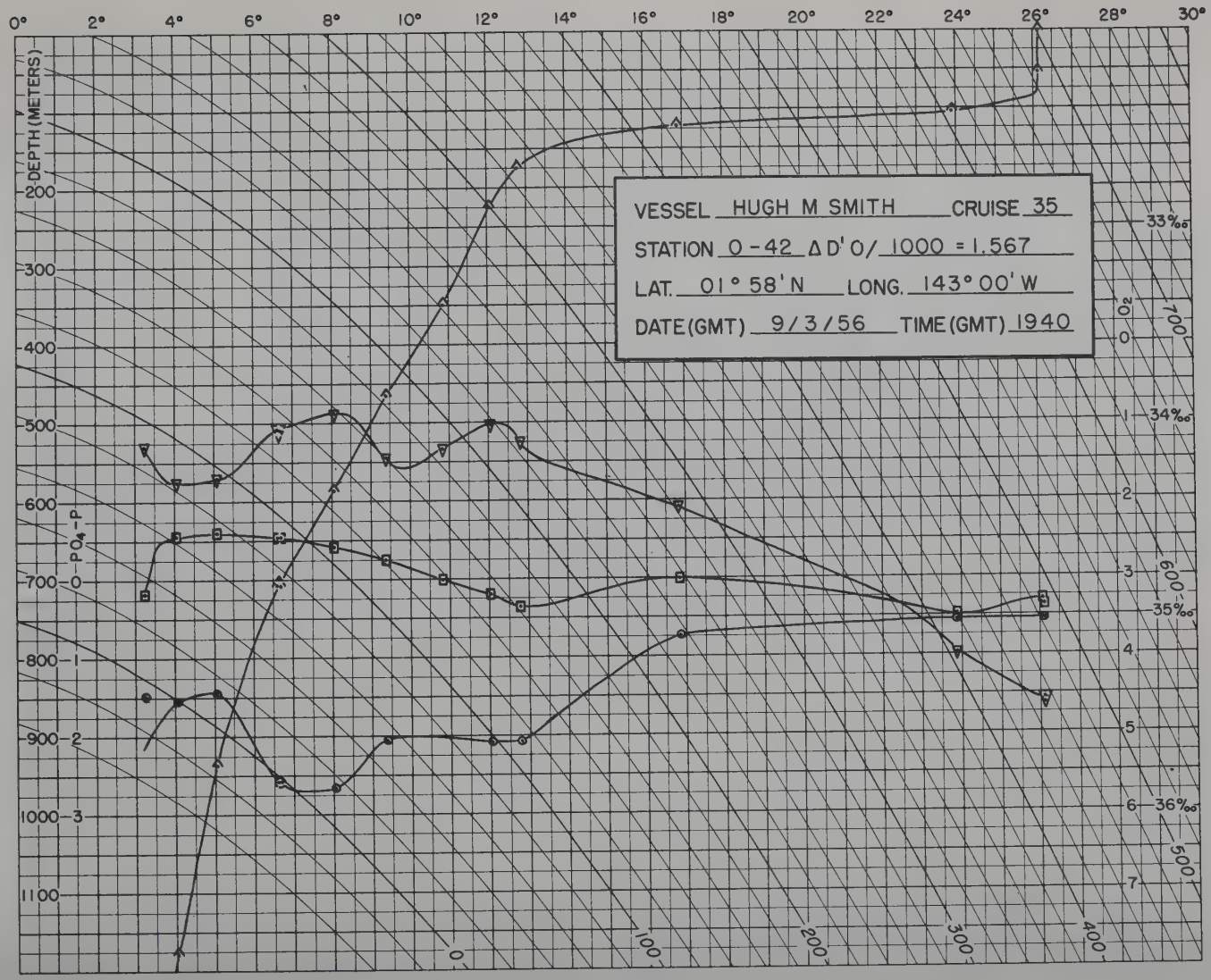

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-37 ΔD' O/ 1000 = 1.662
LAT. 07° 00'S LONG. 143° 02' W
DATE (GMT) 8/31/56 TIME (GMT) 2334

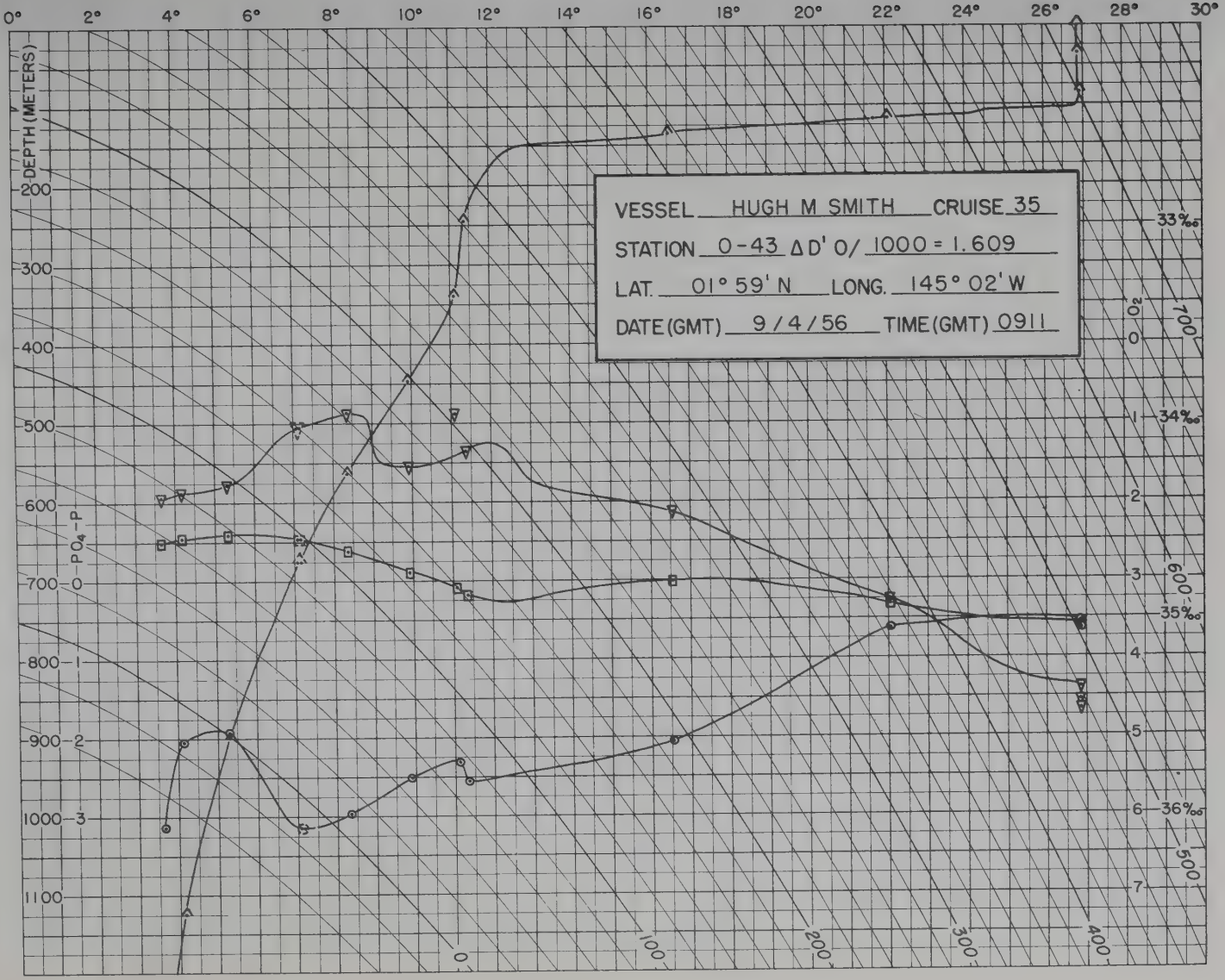

VESSEL HUGH M SMITH CRUISE 35
STATION 0-38 ΔD'O/1000 = 1.593
LAT. 05° 27' S LONG. 143° 02' W
DATE (GMT) 9/1/56 TIME (GMT) 1154
DEPTH (METERS)
PO_4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

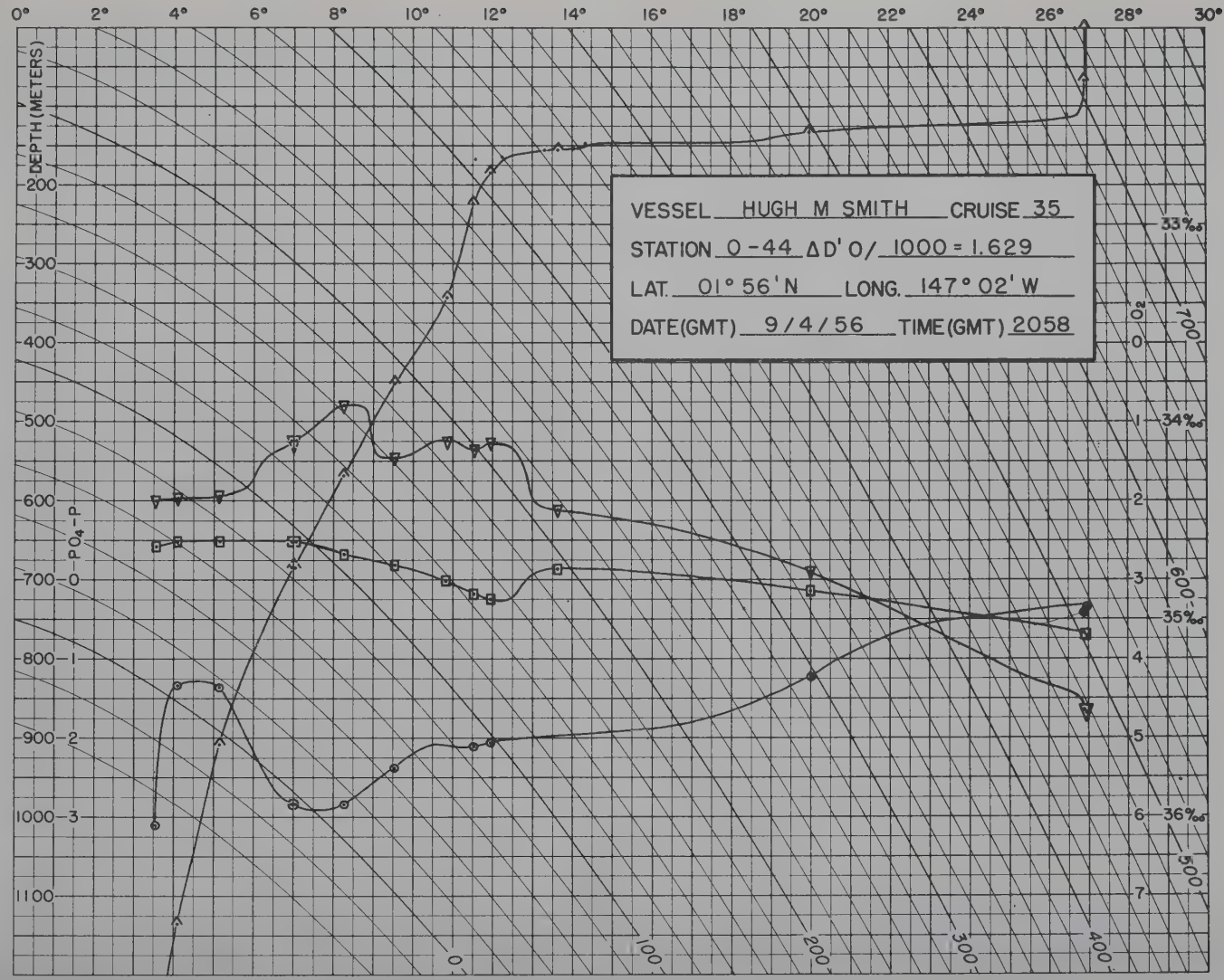

VESSEL HUGH M SMITH CRUISE 35
STATION 0-39 ΔD' O/ 1000 = 1.527
LAT. 04° 01' S LONG. 143° 06' W
DATE (GMT) 9/1/56 TIME (GMT) 2245
DEPTH (METERS)
PO4-P
O2
33‰
34‰
35‰
36‰
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°

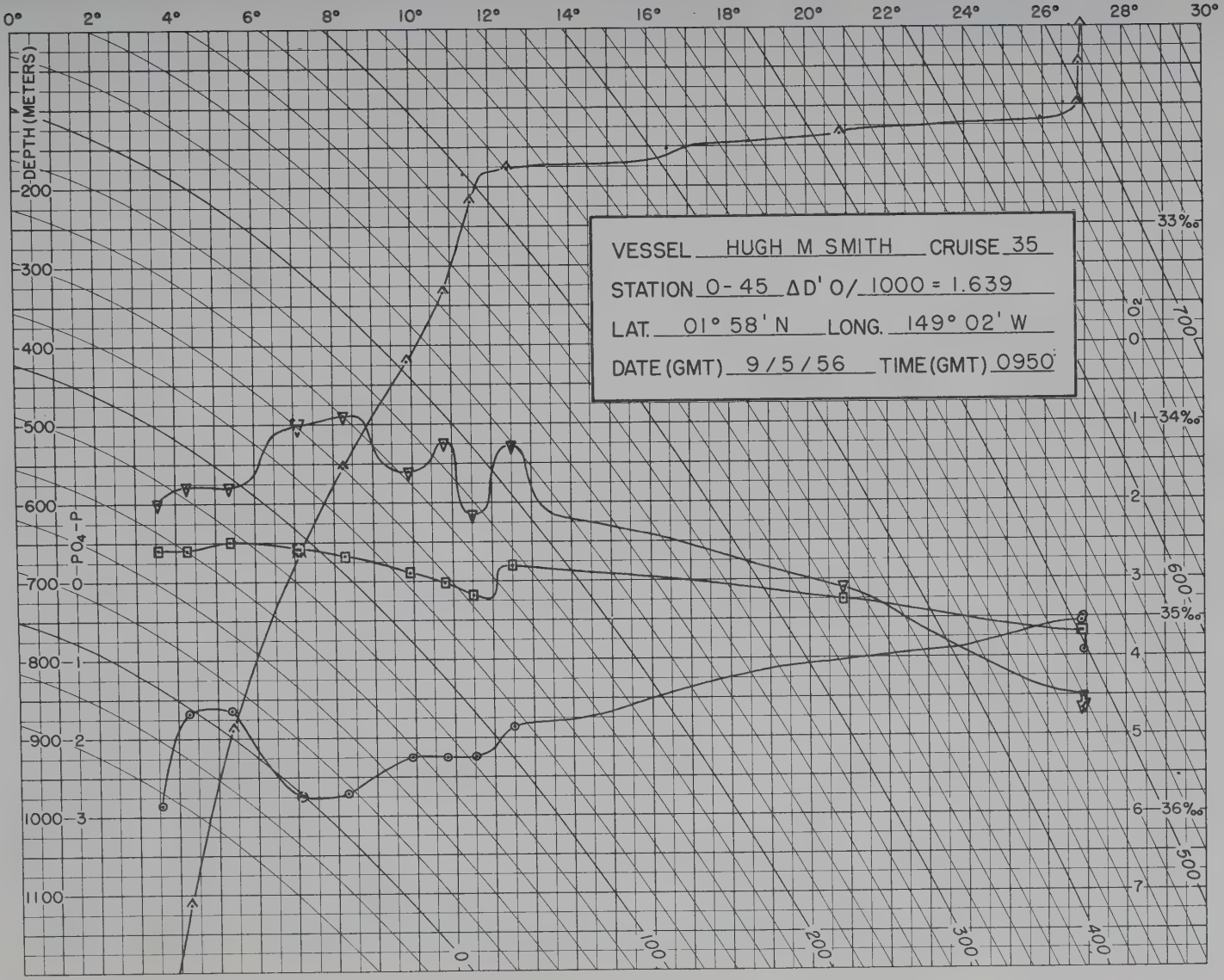

VESSEL HUGH M SMITH CRUISE 35
STATION 0-40 ΔD' O/ 1000 = 1.470
LAT. 01° 54' S LONG. 143° 09' W
DATE(GMT) 9/2/56 TIME(GMT) 1407
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

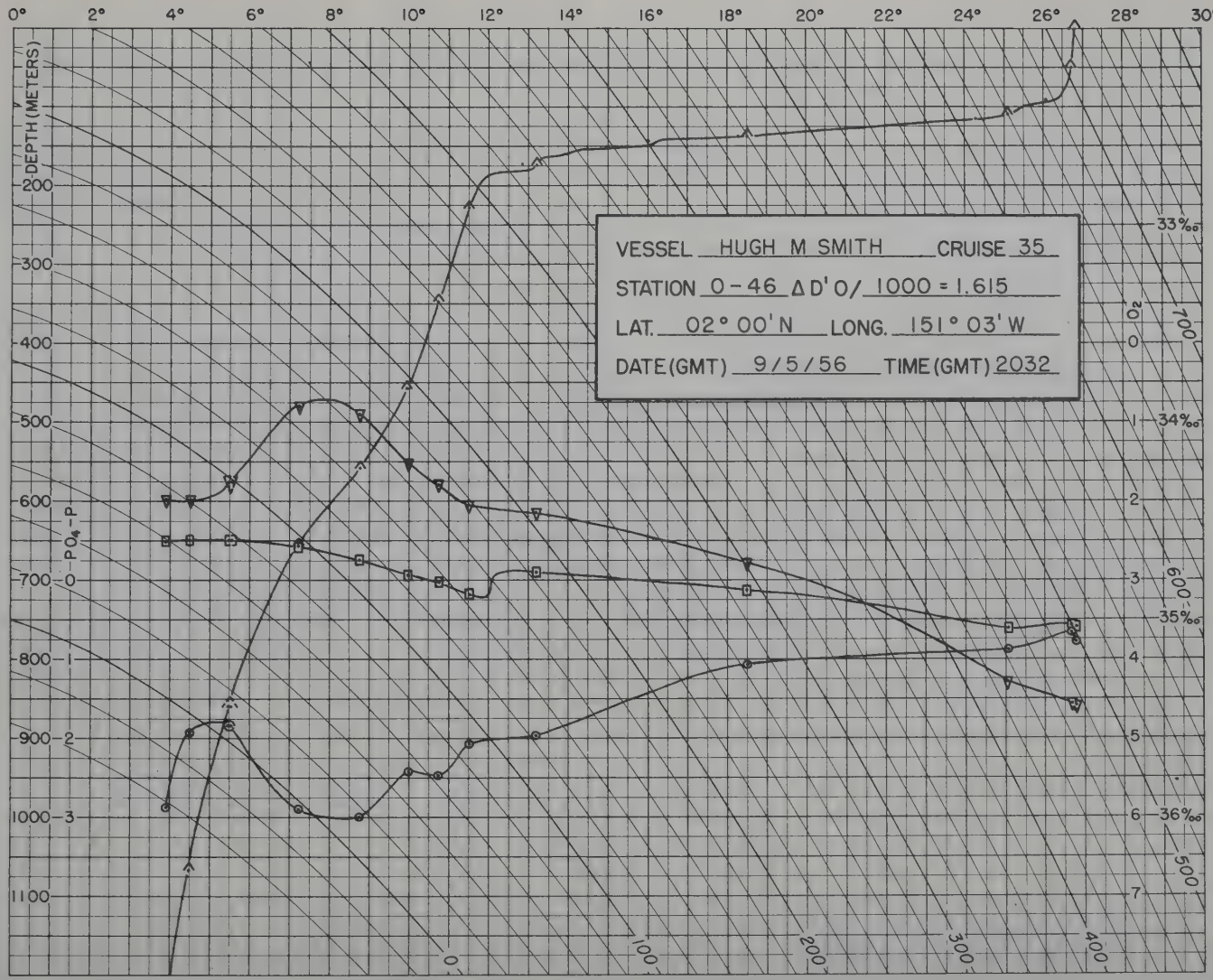

VESSEL HUGH M SMITH CRUISE 35
STATION 0-41 ΔD' O/ 1000 = 1.516
LAT. 00° 02' N LONG. 143° 03' W
DATE (GMT) 9/2/56 TIME (GMT) 0228
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

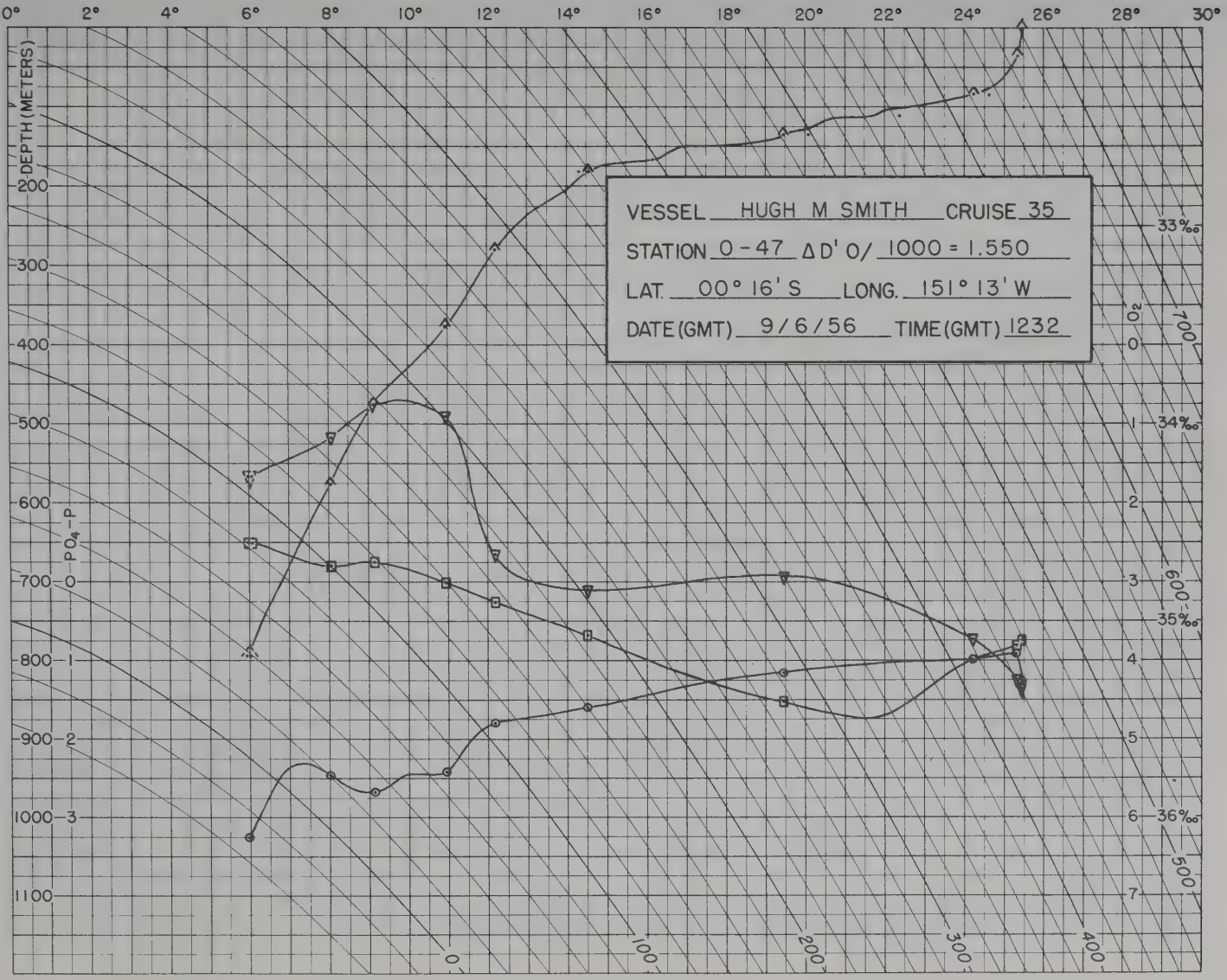

VESSEL HUGH M SMITH CRUISE 35
STATION 0-42 ΔD'O/1000 = 1.567
LAT. 01° 58' N LONG. 143° 00' W
DATE(GMT) 9/3/56 TIME(GMT) 1940
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

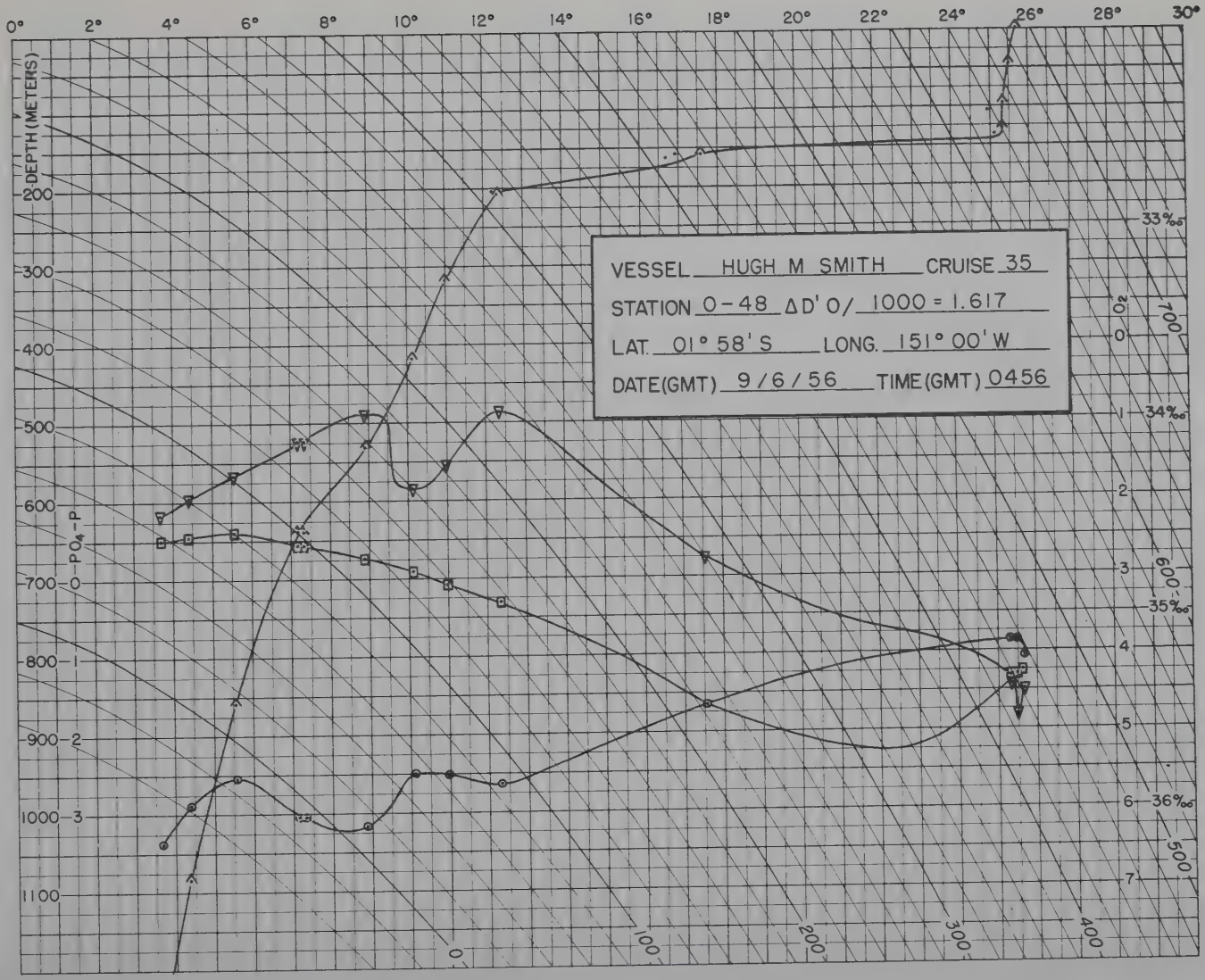

VESSEL HUGH M SMITH CRUISE 35
STATION 0-43 ΔD' 0/1000 = 1.609
LAT. 01° 59' N LONG. 145° 02' W
DATE (GMT) 9/4/56 TIME (GMT) 0911
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

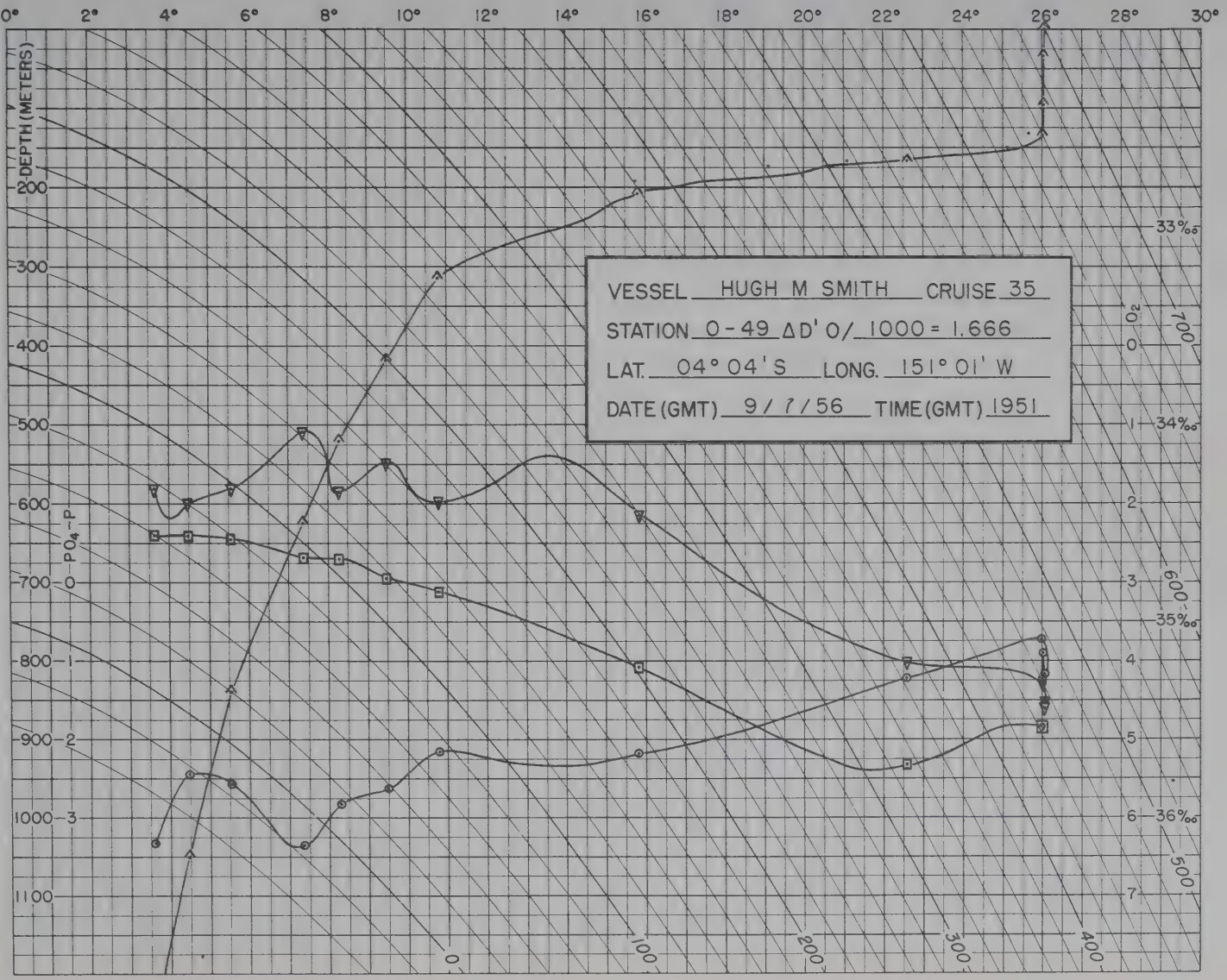

VESSEL HUGH M SMITH CRUISE 35
STATION 0-44 ΔD' 0/1000 = 1.629
LAT. 01° 56' N LONG. 147° 02' W
DATE(GMT) 9/4/56 TIME(GMT) 2058
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

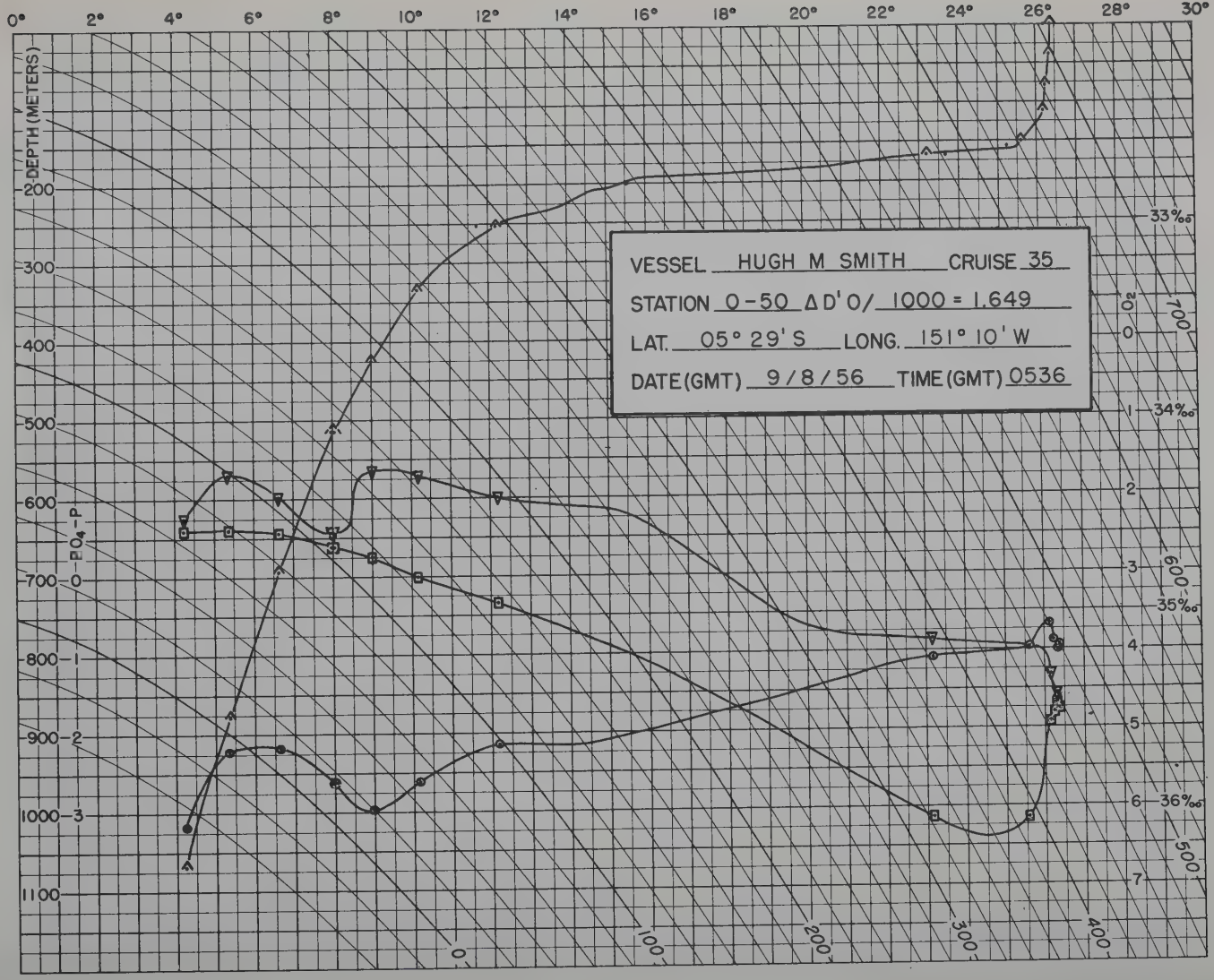

VESSEL HUGH M SMITH CRUISE 35
STATION 0-45 ΔD' O/ 1000 = 1.639
LAT. 01° 58' N LONG. 149° 02' W
DATE (GMT) 9/5/56 TIME (GMT) 0950
DEPTH (METERS)
PO4-P
O2
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

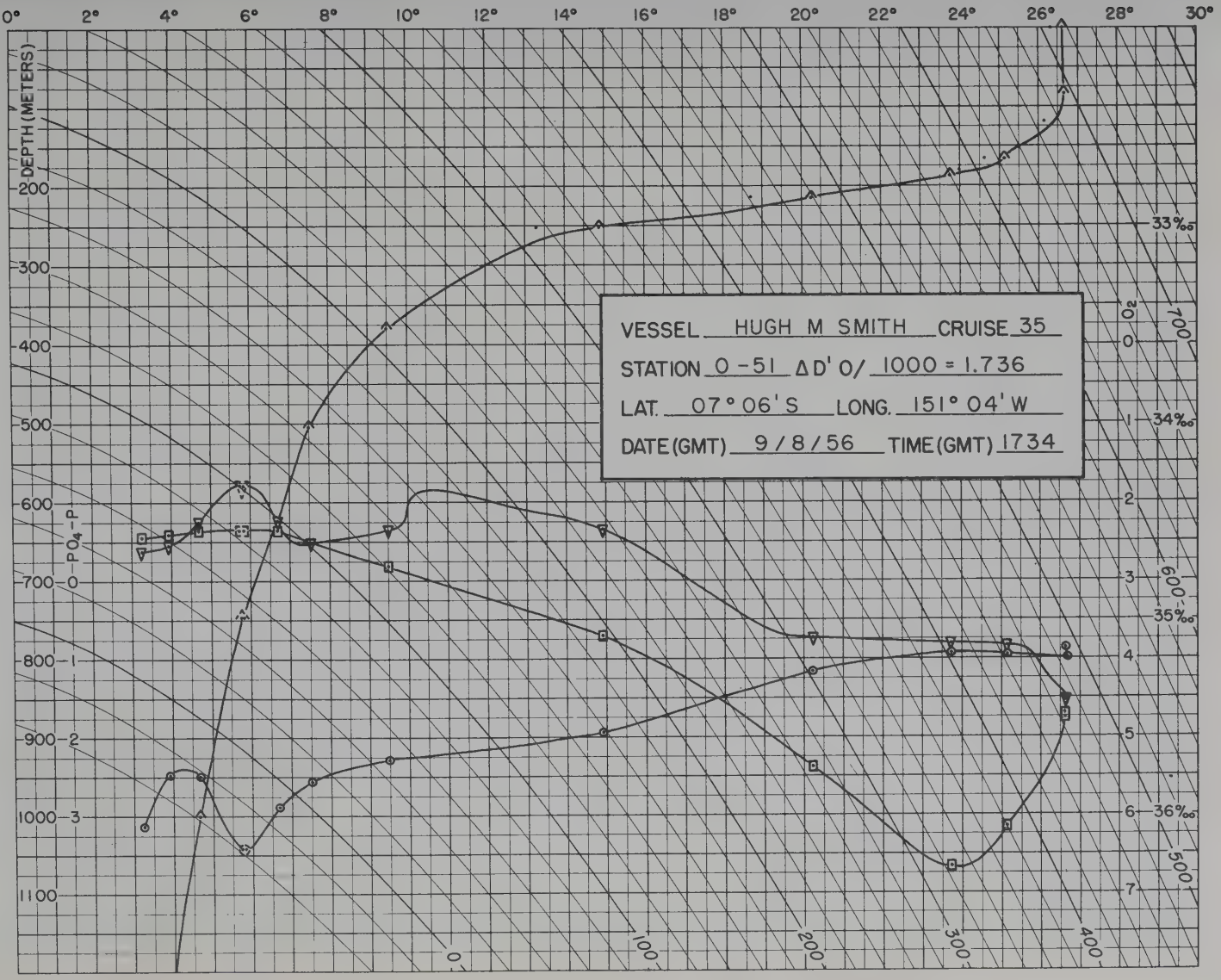

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
0 - PO4 - P
0
1
2
VESSEL HUGH M SMITH CRUISE 35
STATION 0-46 ΔD'O/1000 = 1.615
LAT. 02° 00' N LONG. 151° 03' W
DATE (GMT) 9/5/56 TIME (GMT) 2032
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700

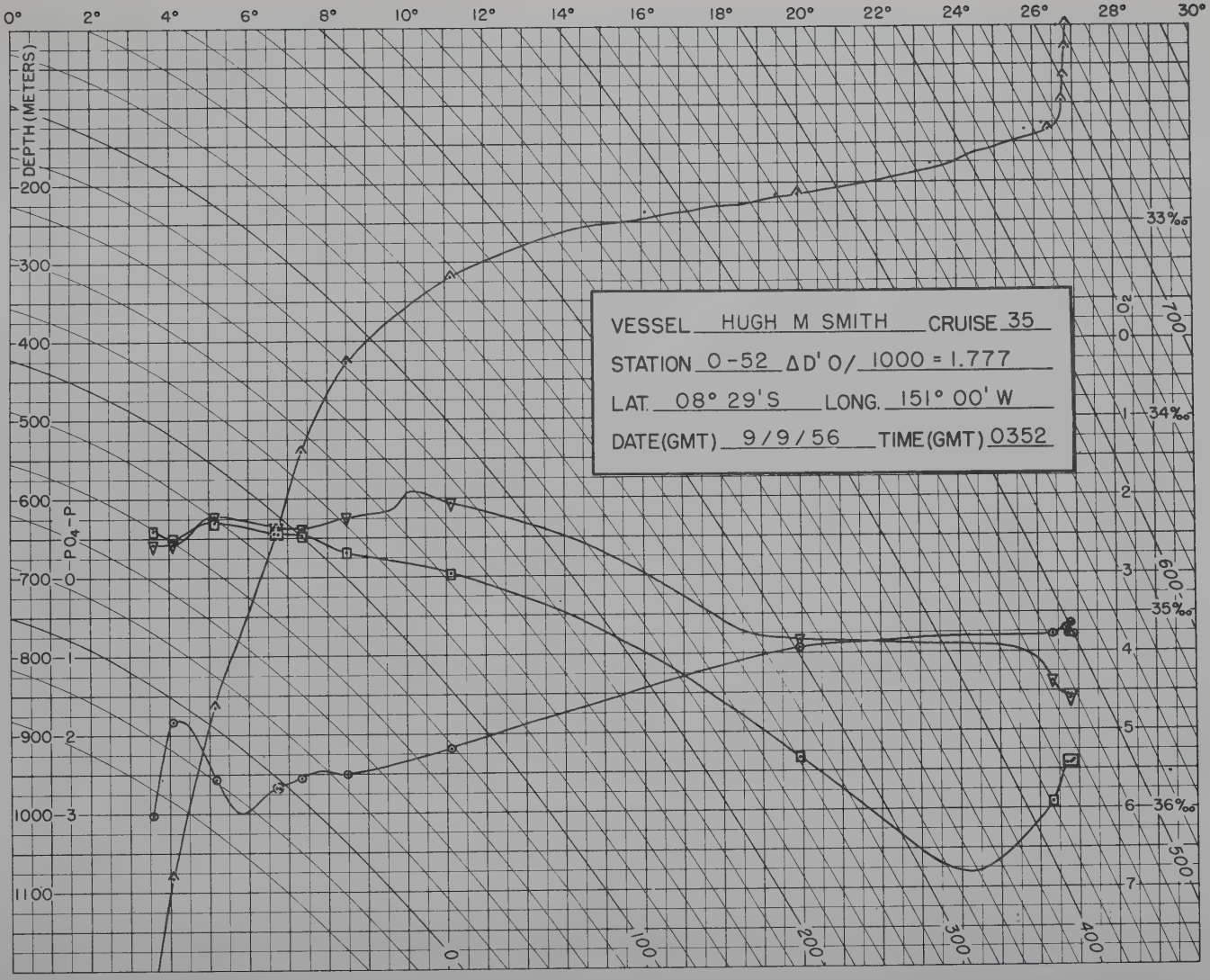

VESSEL HUGH M SMITH CRUISE 35
STATION 0-47 ΔD' O/ 1000 = 1.550
LAT. 00° 16' S LONG. 151° 13' W
DATE (GMT) 9/6/56 TIME (GMT) 1232
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

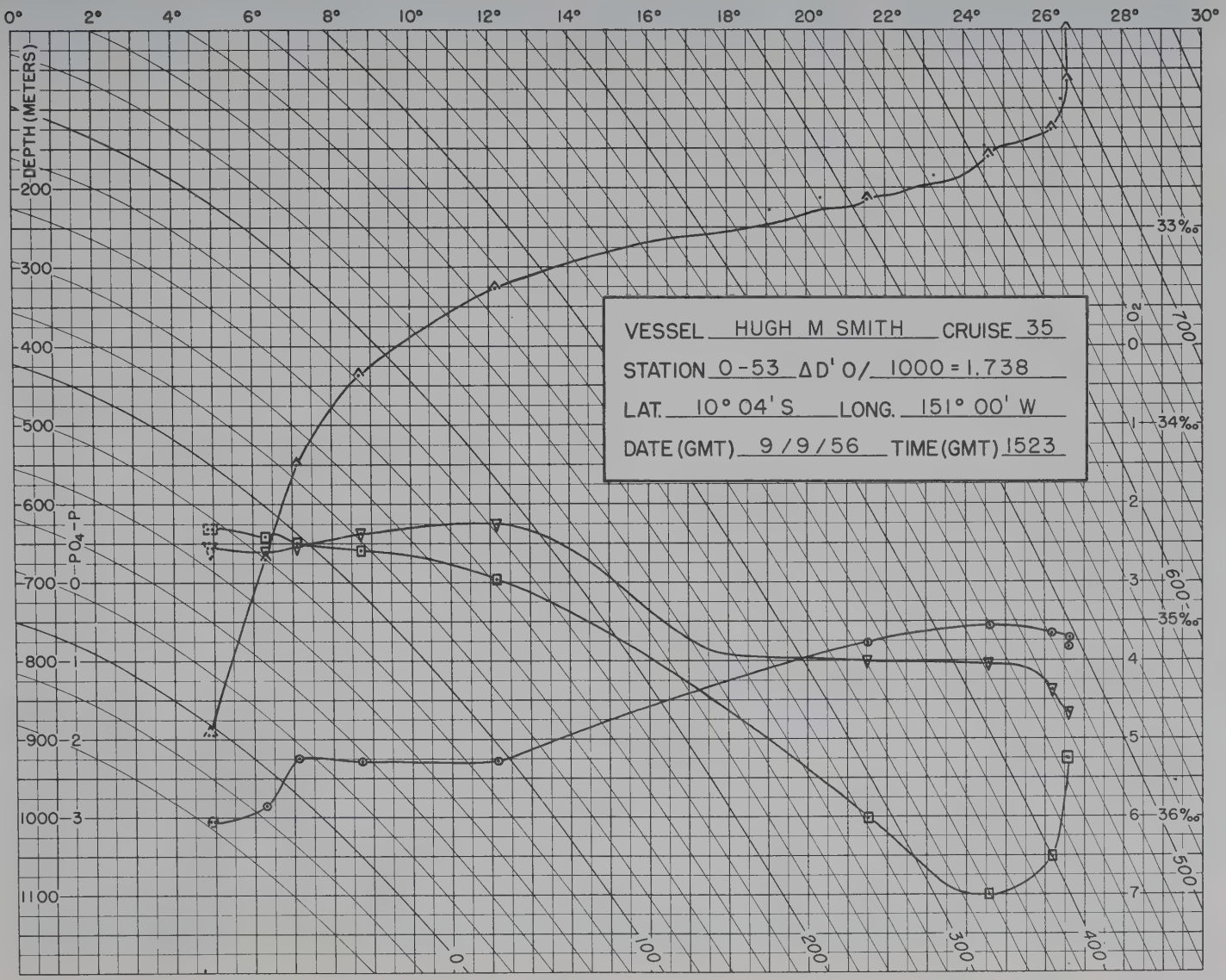

VESSEL HUGH M SMITH CRUISE 35
STATION 0-48 ΔD' O/ 1000 = 1.617
LAT. 01° 58' S LONG. 151° 00' W
DATE(GMT) 9/6/56 TIME(GMT) 0456
DEPTH (METERS)
PO_4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
200 300 400 500 600 700 800 900 1000 1100
0 1 2 3
33‰ 34‰ 35‰ 36‰
0 100 200 300 400 500 600 700

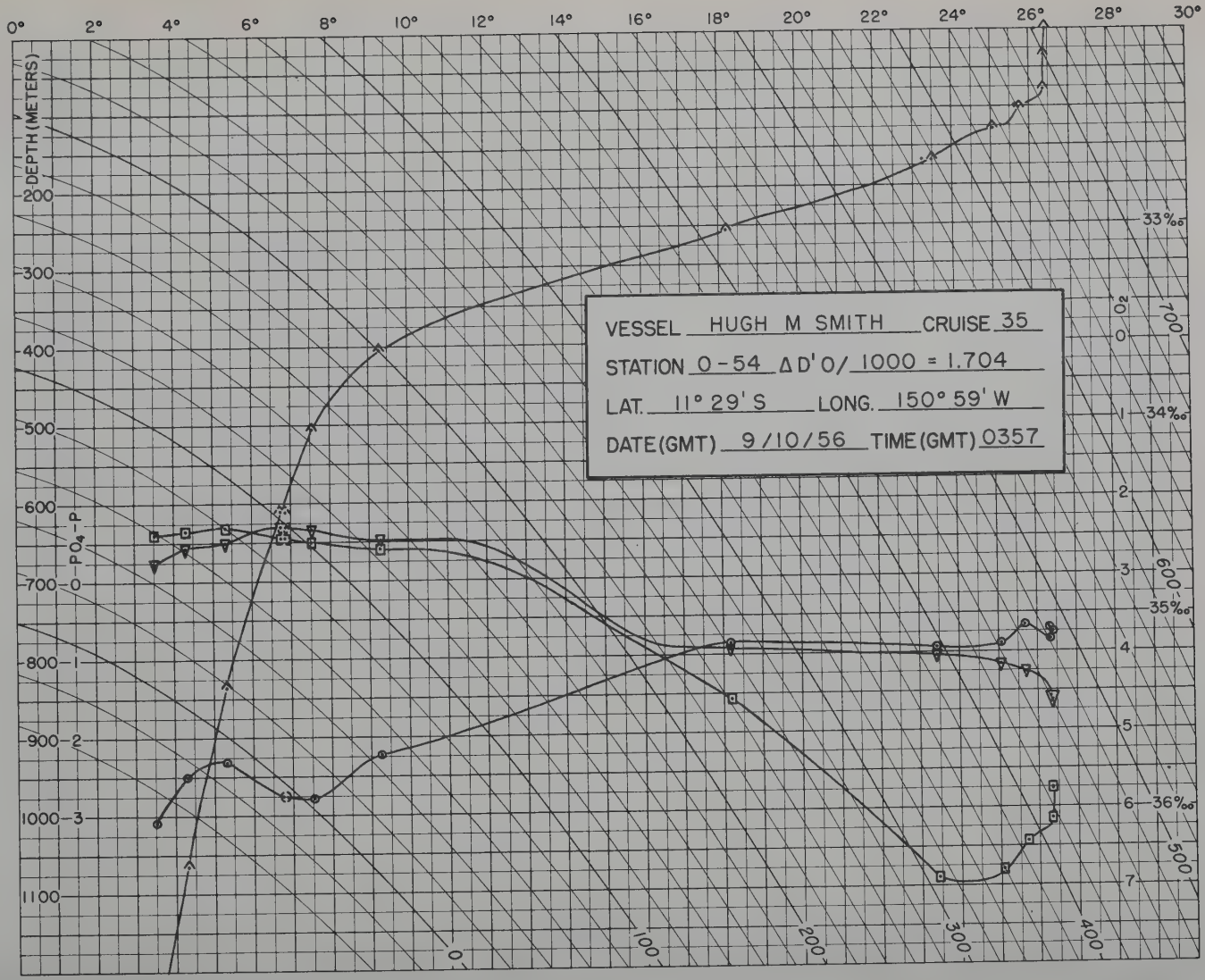

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-49 ΔD' 0/1000 = 1.666
LAT. 04° 04' S LONG. 151° 01' W
DATE (GMT) 9/7/56 TIME (GMT) 1951
0
100
200
300
400
500
600
700

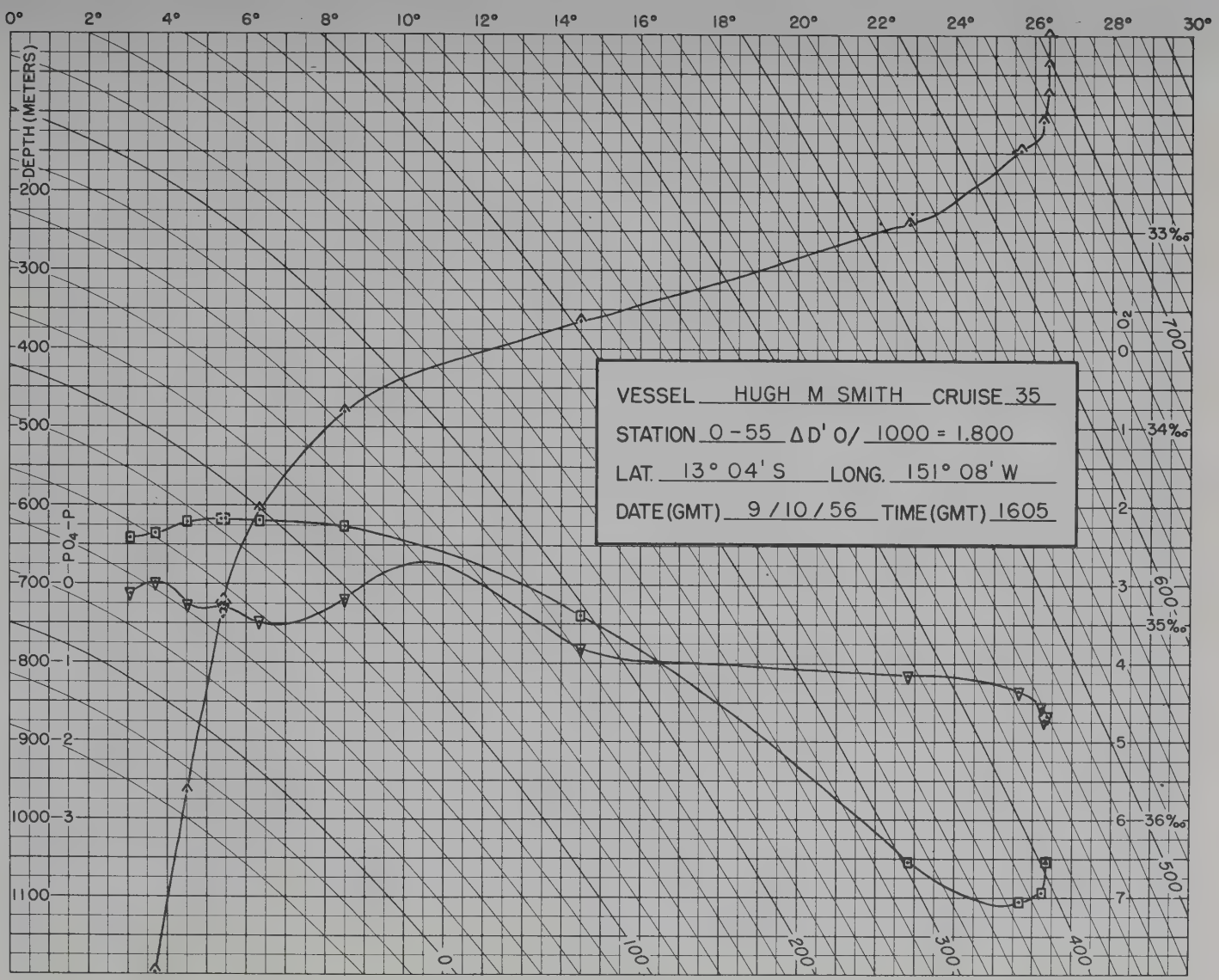

VESSEL HUGH M SMITH CRUISE 35
STATION 0-50 ΔD'O/1000 = 1.649
LAT. 05° 29' S LONG. 151° 10' W
DATE (GMT) 9/8/56 TIME (GMT) 0536
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

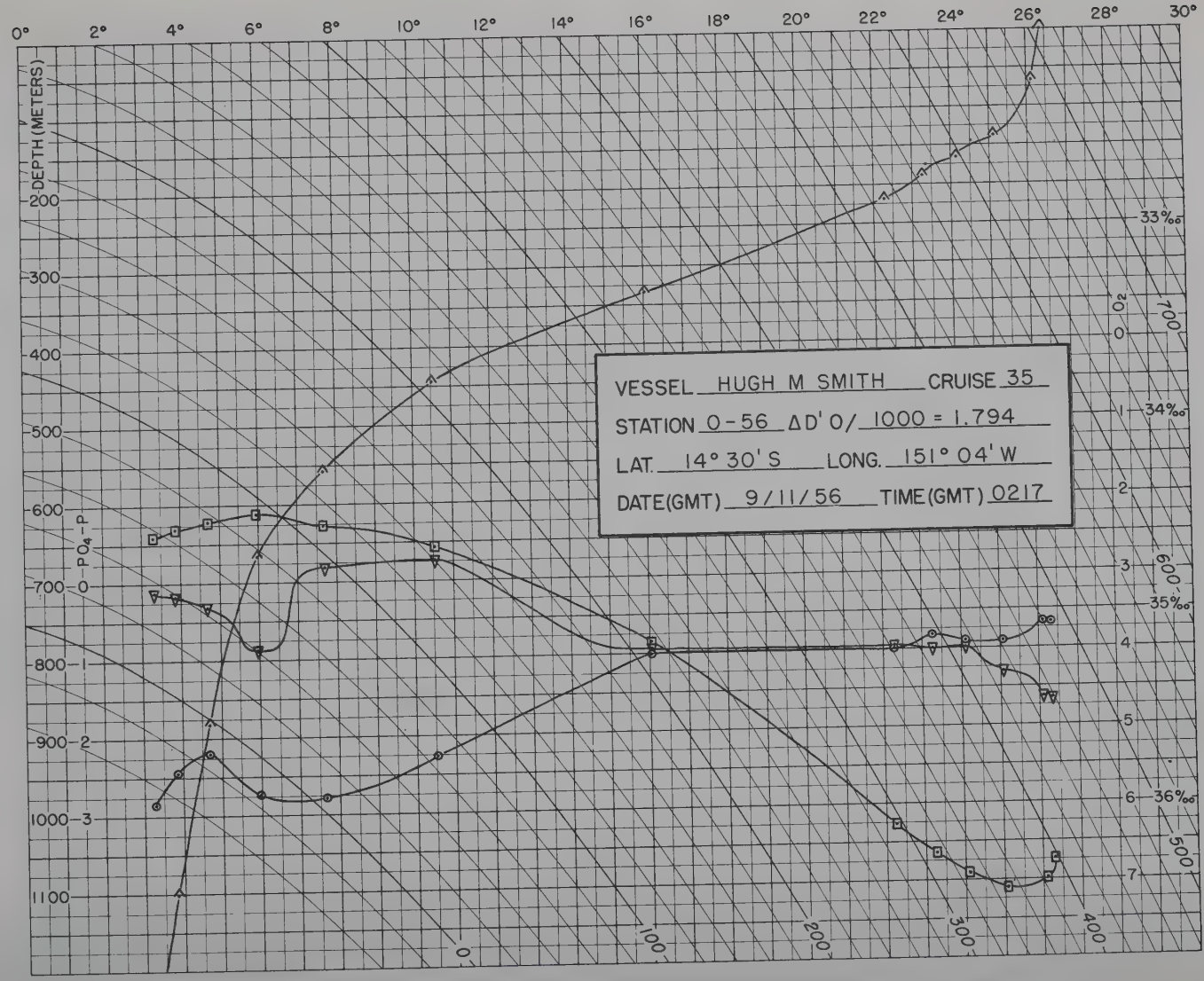

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
33‰
34‰
35‰
36‰
600
700
500
0
100
200
300
400
VESSEL HUGH M SMITH CRUISE 35
STATION 0-51 ΔD' O/ 1000 = 1.736
LAT. 07° 06' S LONG. 151° 04' W
DATE (GMT) 9/8/56 TIME (GMT) 1734

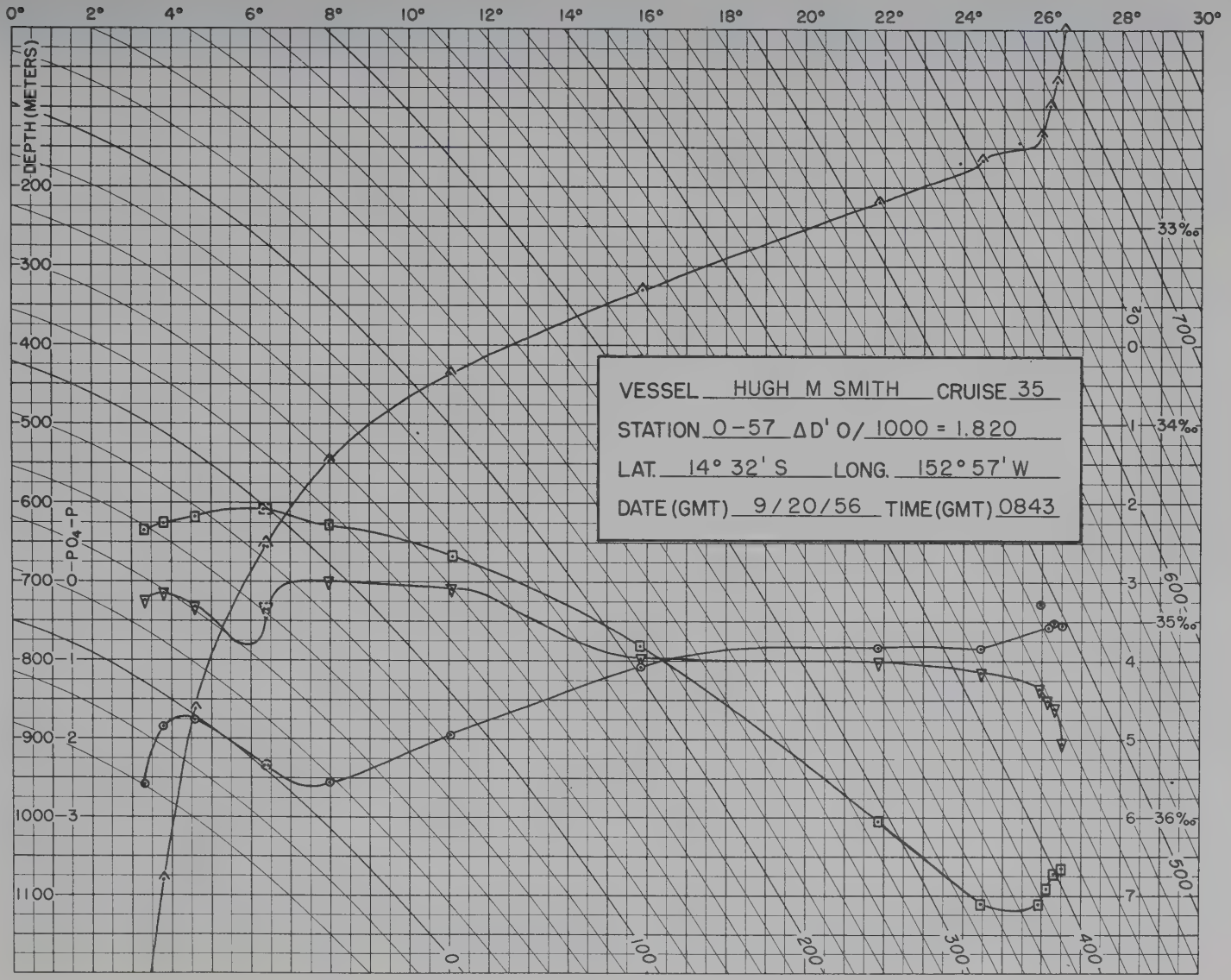

VESSEL HUGH M SMITH CRUISE 35
STATION 0-52 ΔD' O/ 1000 = 1.777
LAT. 08° 29'S LONG. 151° 00' W
DATE(GMT) 9/9/56 TIME(GMT) 0352
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

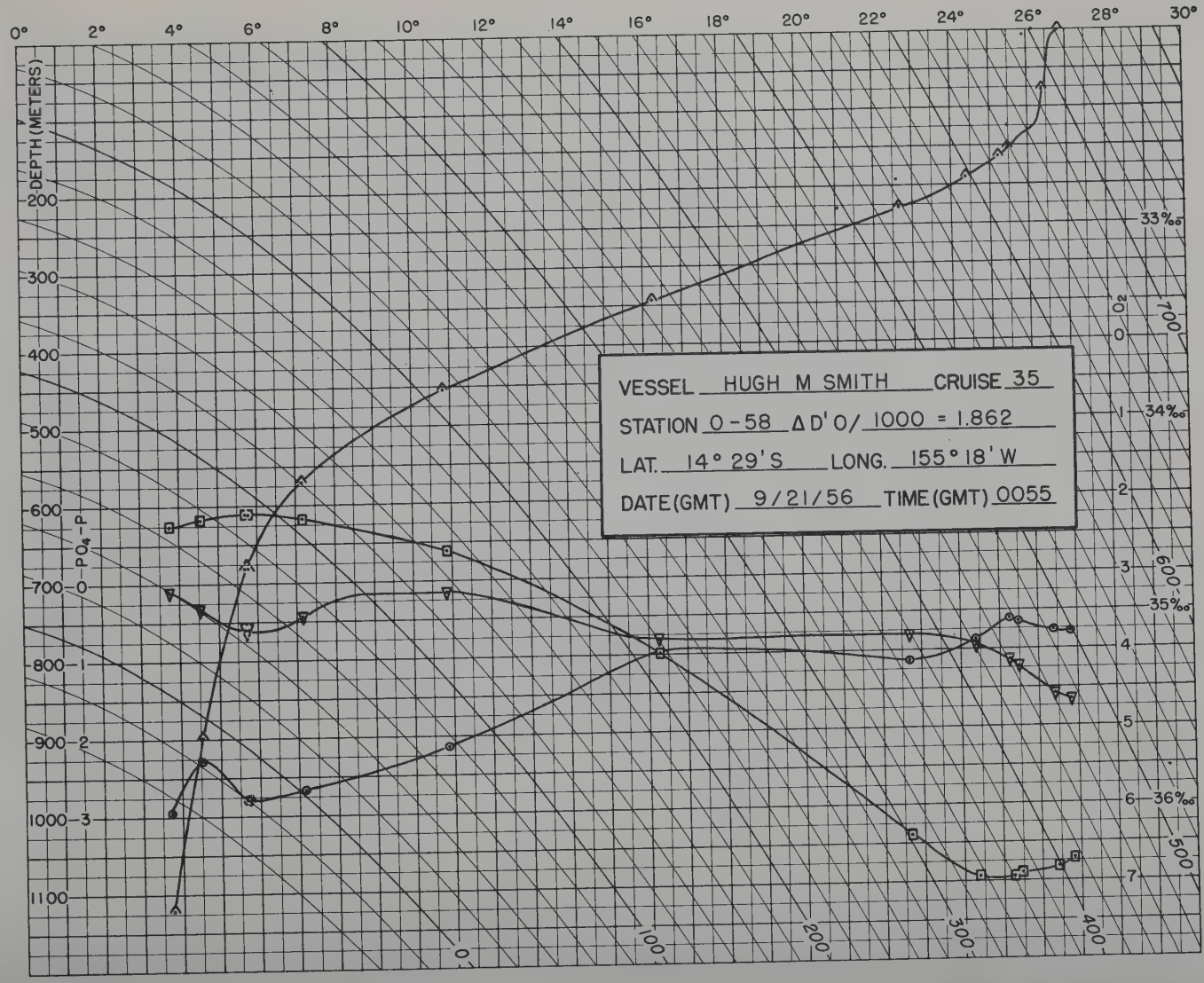

VESSEL HUGH M SMITH CRUISE 35
STATION 0-53 ΔD' O/ 1000 = 1.738
LAT. 10° 04' S LONG. 151° 00' W
DATE (GMT) 9/9/56 TIME (GMT) 1523
DEPTH (METERS)
PO4-P
O2
33‰
34‰
35‰
36‰

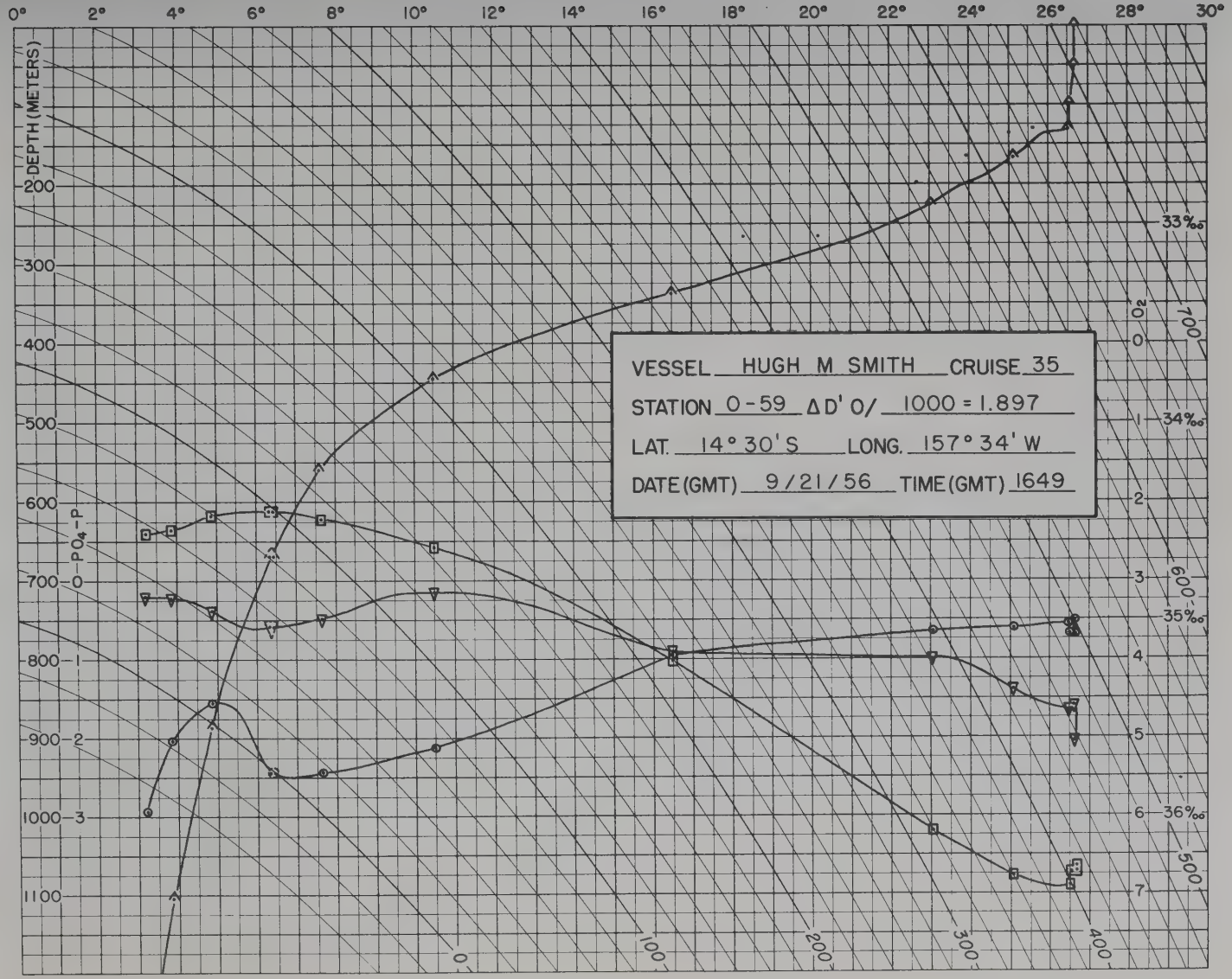

VESSEL HUGH M SMITH CRUISE 35
STATION 0-54 ΔD'O/1000 = 1.704
LAT. 11° 29' S LONG. 150° 59' W
DATE(GMT) 9/10/56 TIME(GMT) 0357
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

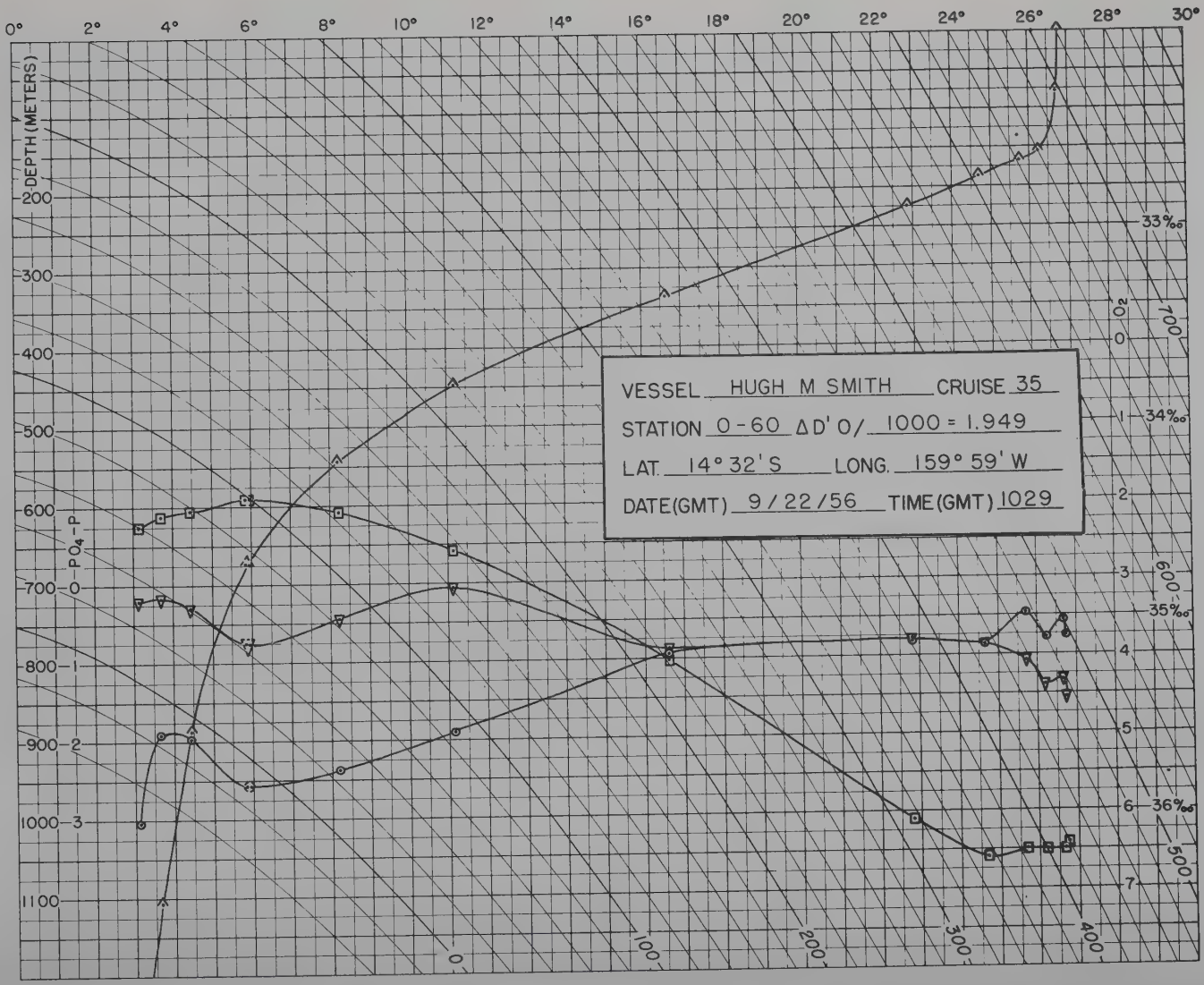

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-55 ΔD' O/ 1000 = 1.800
LAT. 13° 04' S LONG. 151° 08' W
DATE (GMT) 9/10/56 TIME (GMT) 1605

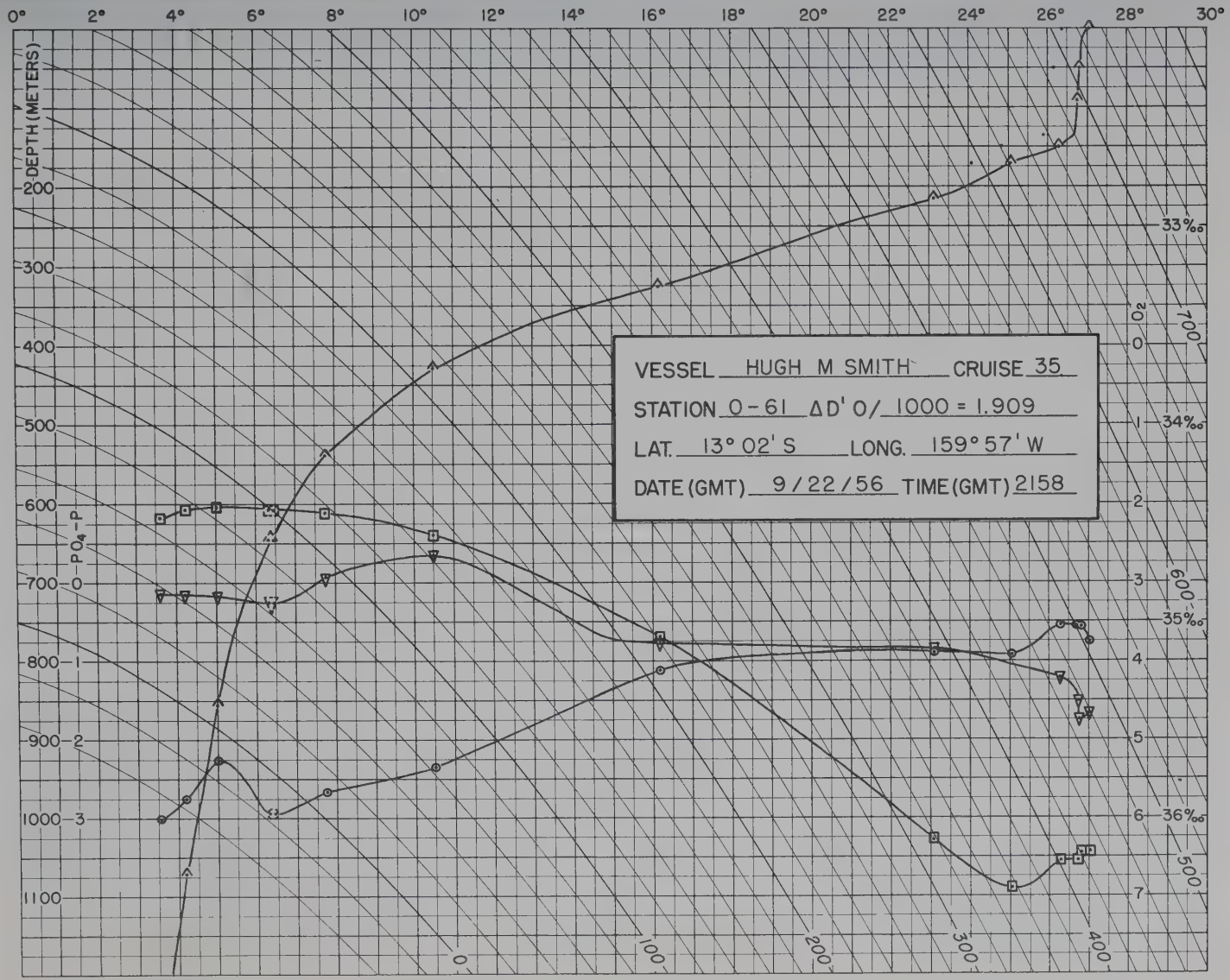

VESSEL HUGH M SMITH CRUISE 35
STATION 0-56 ΔD' O/ 1000 = 1.794
LAT. 14° 30' S LONG. 151° 04' W
DATE(GMT) 9/11/56 TIME(GMT) 0217
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

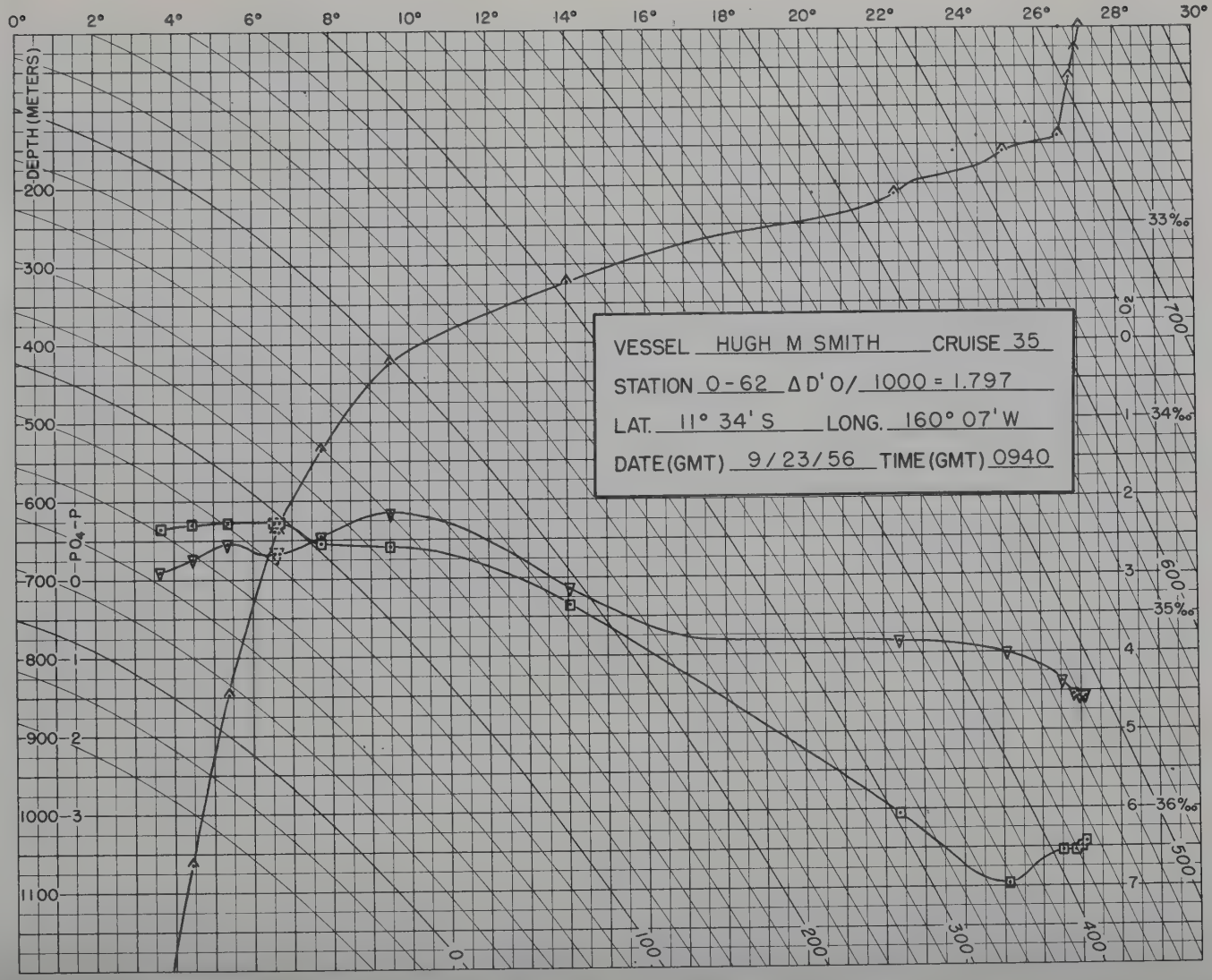

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
100
200
300
400
500
600
700
800
900
1000
1100
0
1
2
3
PO4-P
0
100
200
300
400
500
600
700
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-57 ΔD' 0/1000 = 1.820
LAT. 14° 32' S LONG. 152° 57' W
DATE (GMT) 9/20/56 TIME (GMT) 0843

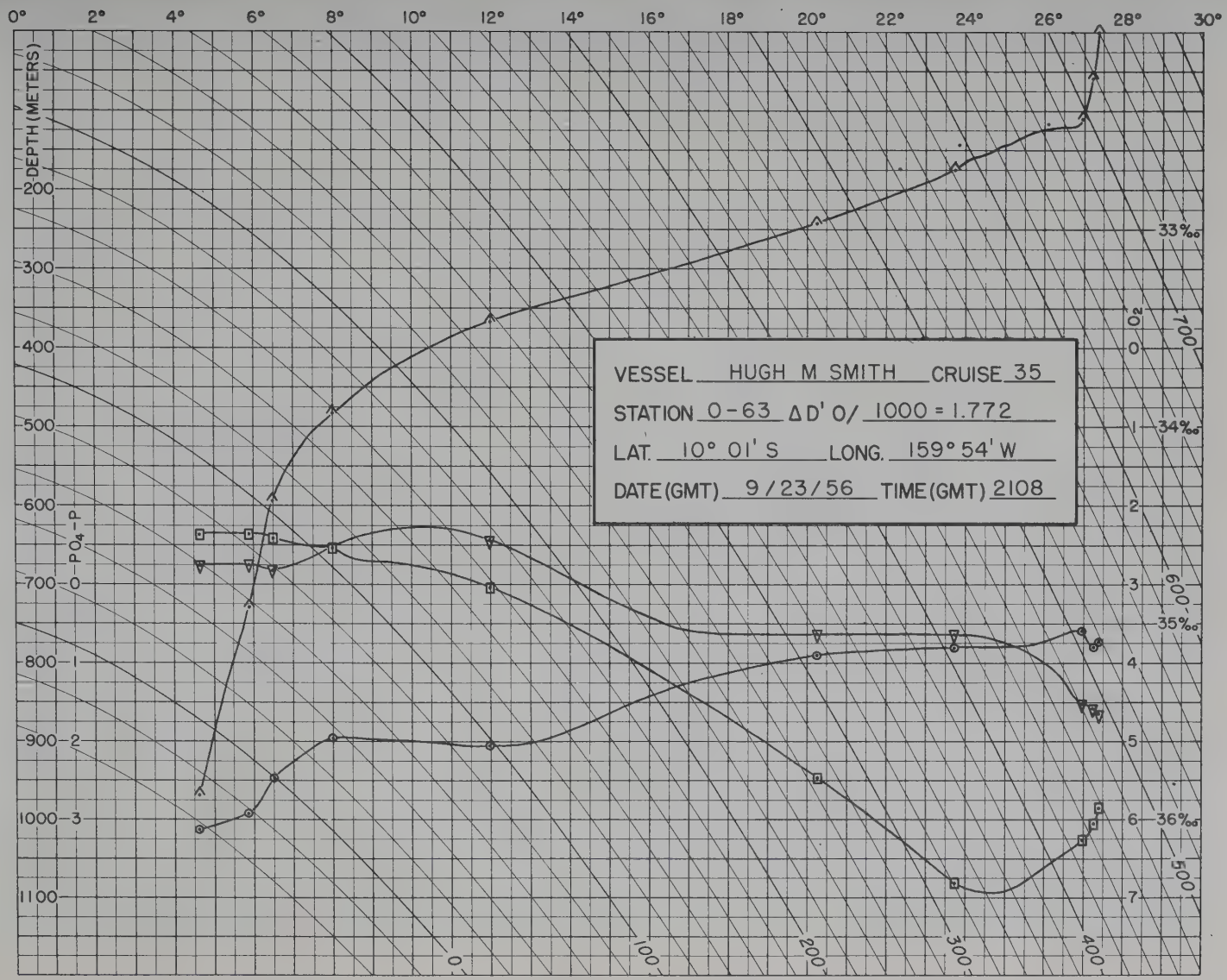

VESSEL HUGH M SMITH CRUISE 35
STATION 0-58 ΔD'O/1000 = 1.862
LAT. 14° 29'S LONG. 155° 18'W
DATE(GMT) 9/21/56 TIME(GMT) 0055
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

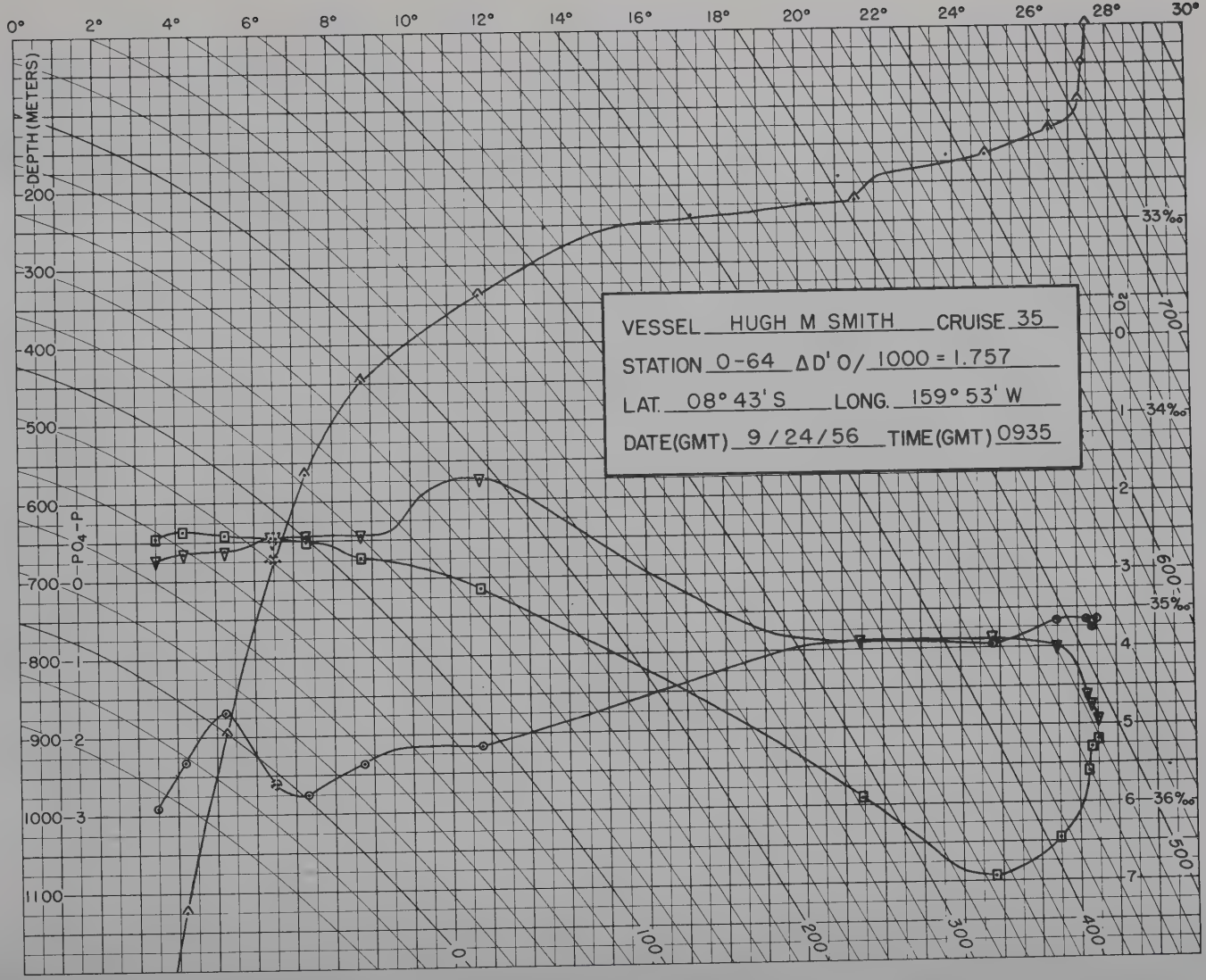

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-59 ΔD' O/ 1000 = 1.897
LAT. 14° 30' S LONG. 157° 34' W
DATE (GMT) 9/21/56 TIME (GMT) 1649

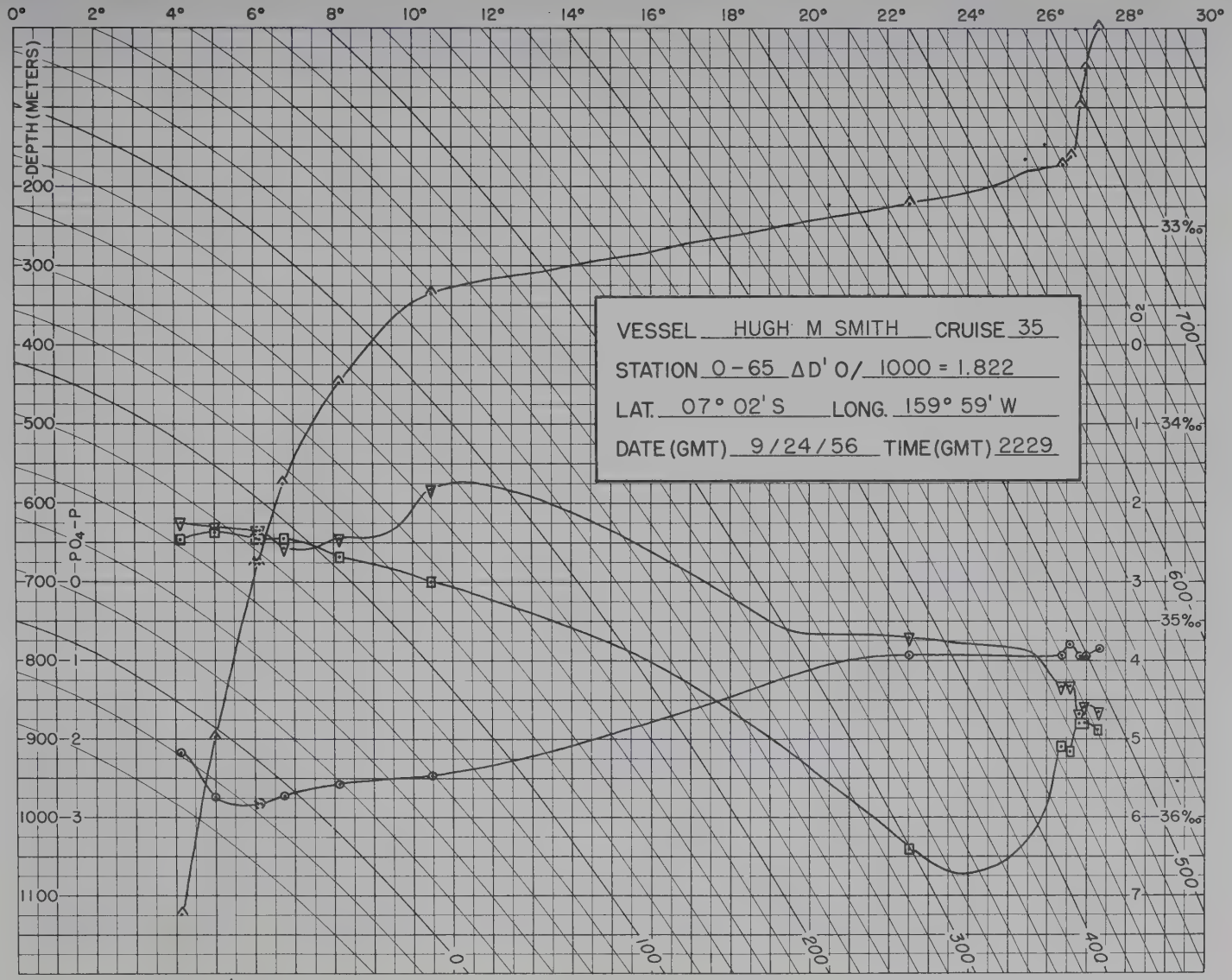

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
0
700
1
34‰
2
3
600
35‰
4
5
6
36‰
500
7
0
100
200
300
400
VESSEL HUGH M SMITH CRUISE 35
STATION 0-60 ΔD' O/ 1000 = 1.949
LAT. 14° 32' S LONG. 159° 59' W
DATE(GMT) 9/22/56 TIME(GMT) 1029

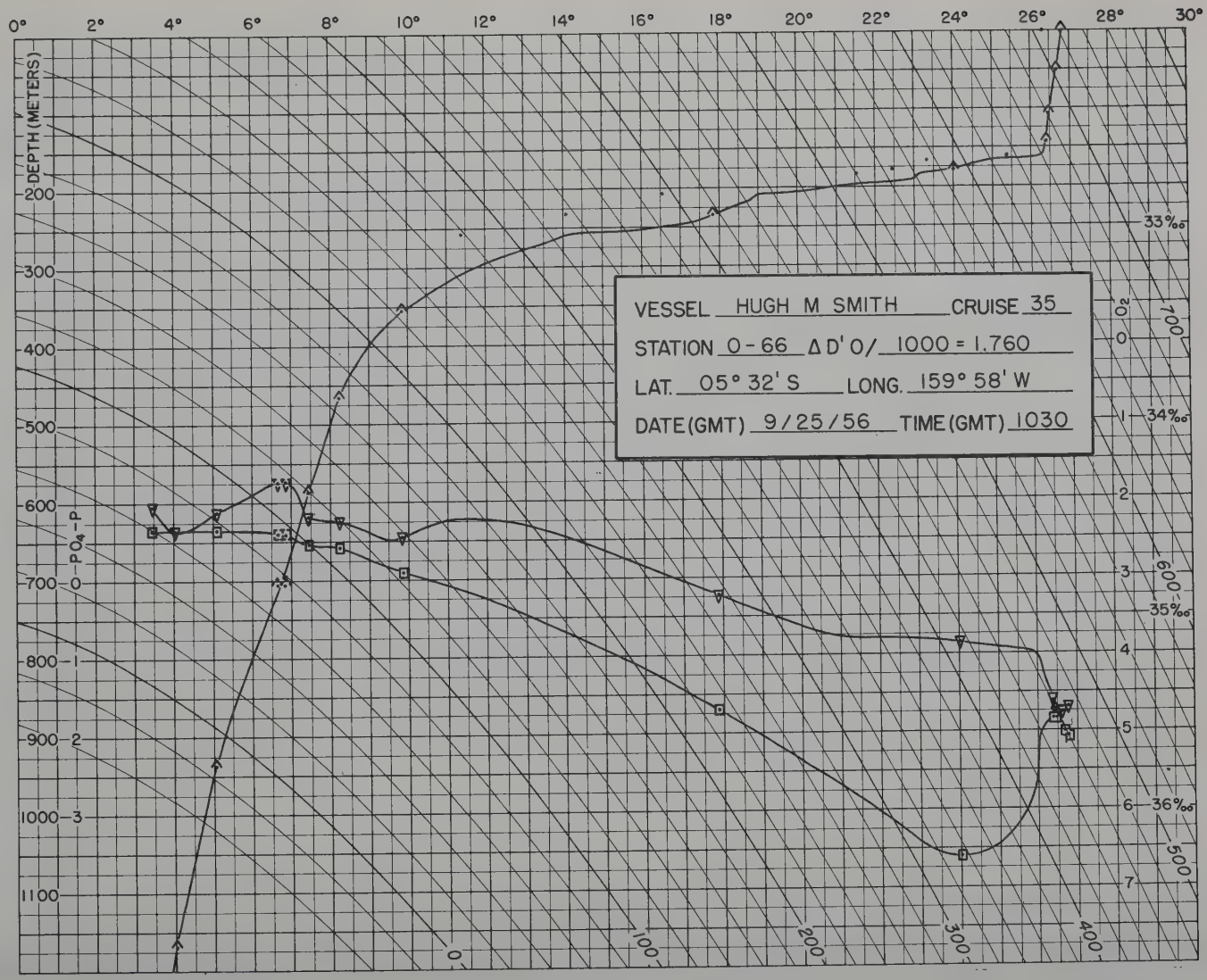

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-61 ΔD' 0/1000 = 1.909
LAT. 13° 02' S LONG. 159° 57' W
DATE (GMT) 9/22/56 TIME (GMT) 2158
0
100
200
300
400
500
600
700

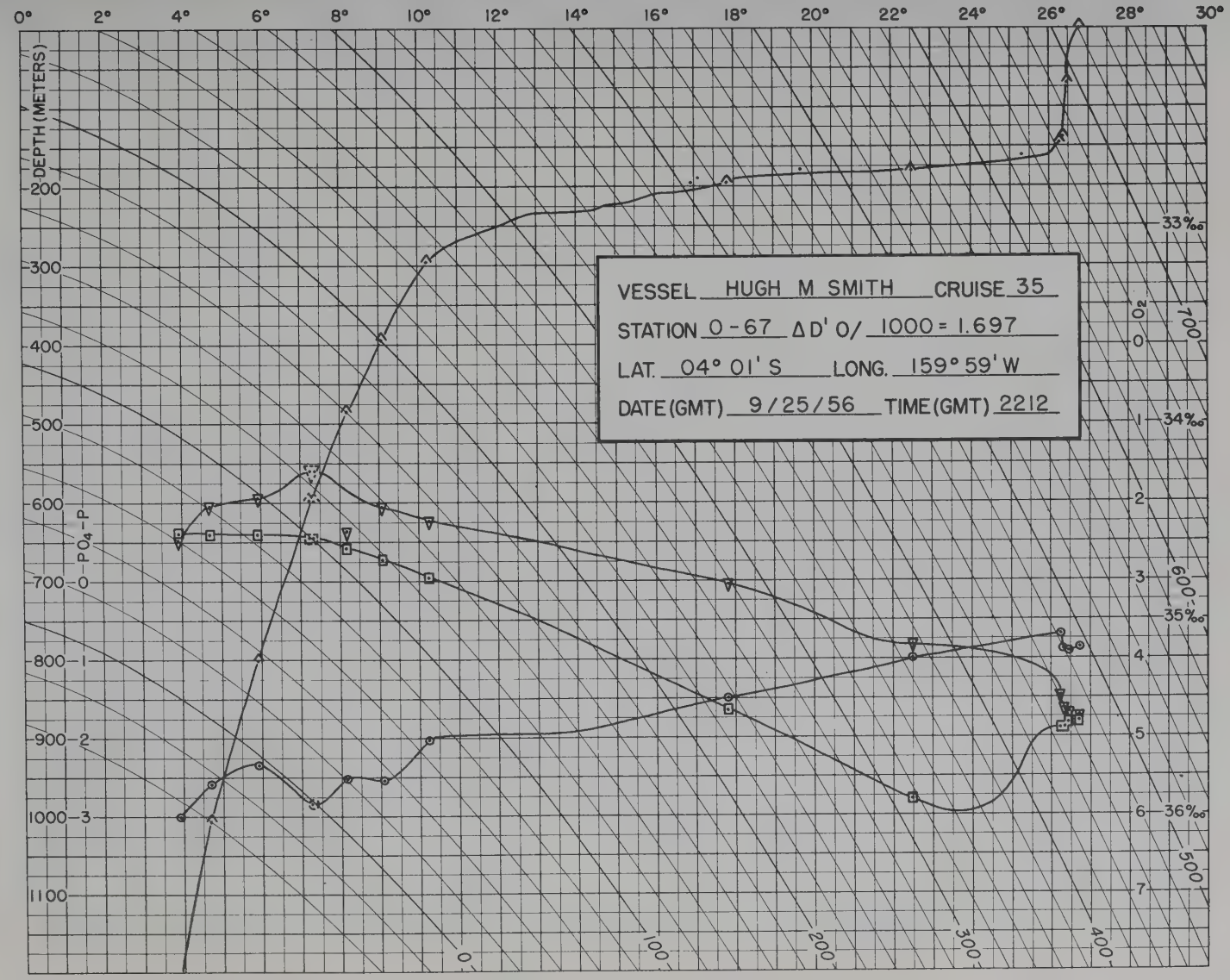

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
1
2
3
4
5
6
7
600
500
0
100
200
300
400
VESSEL HUGH M SMITH CRUISE 35
STATION 0-62 ΔD'O/1000 = 1.797
LAT. 11° 34' S LONG. 160° 07' W
DATE (GMT) 9/23/56 TIME (GMT) 0940

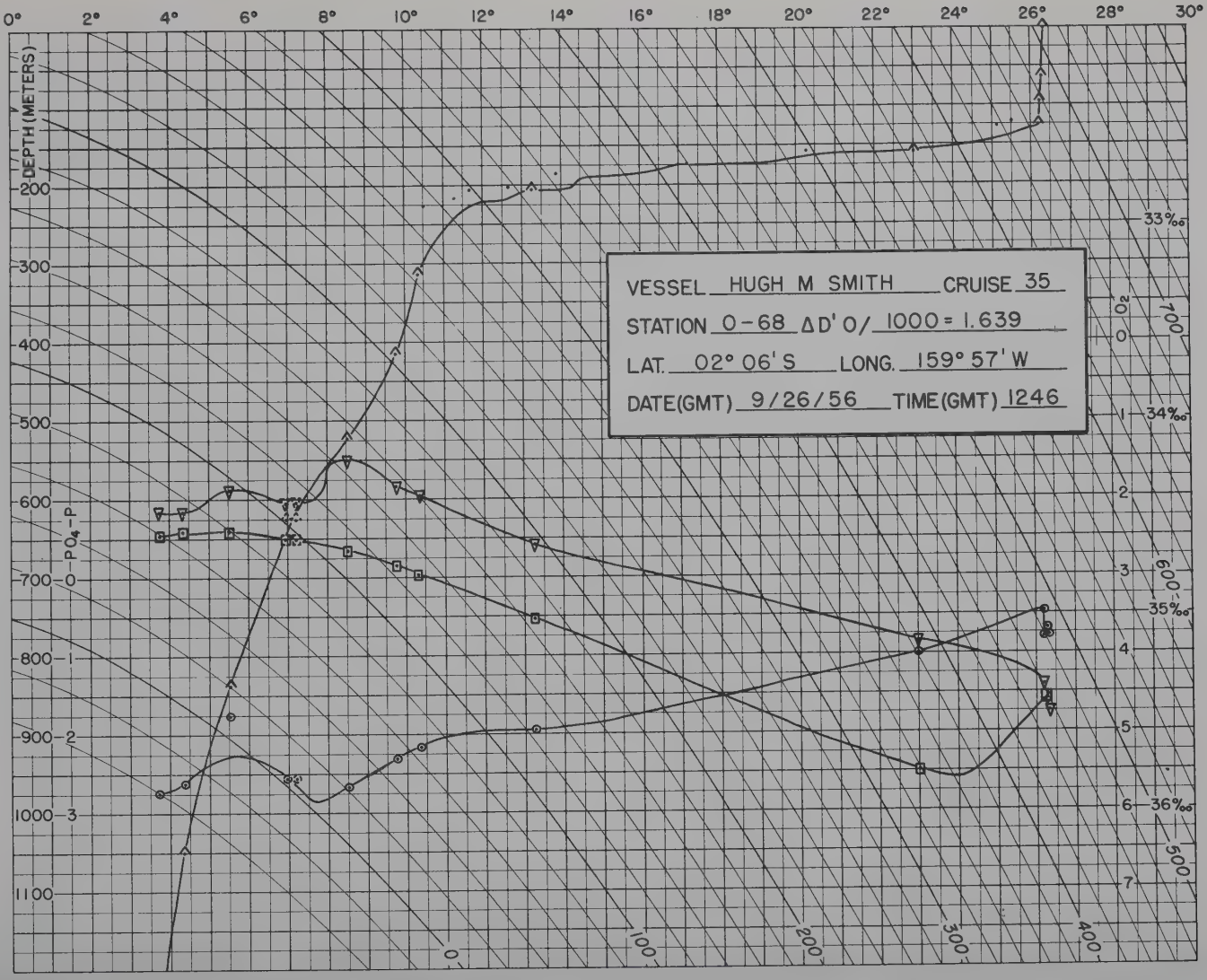

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
VESSEL HUGH M SMITH CRUISE 35
STATION 0-63 ΔD' O/ 1000 = 1.772
LAT. 10° 01' S LONG. 159° 54' W
DATE (GMT) 9/23/56 TIME (GMT) 2108

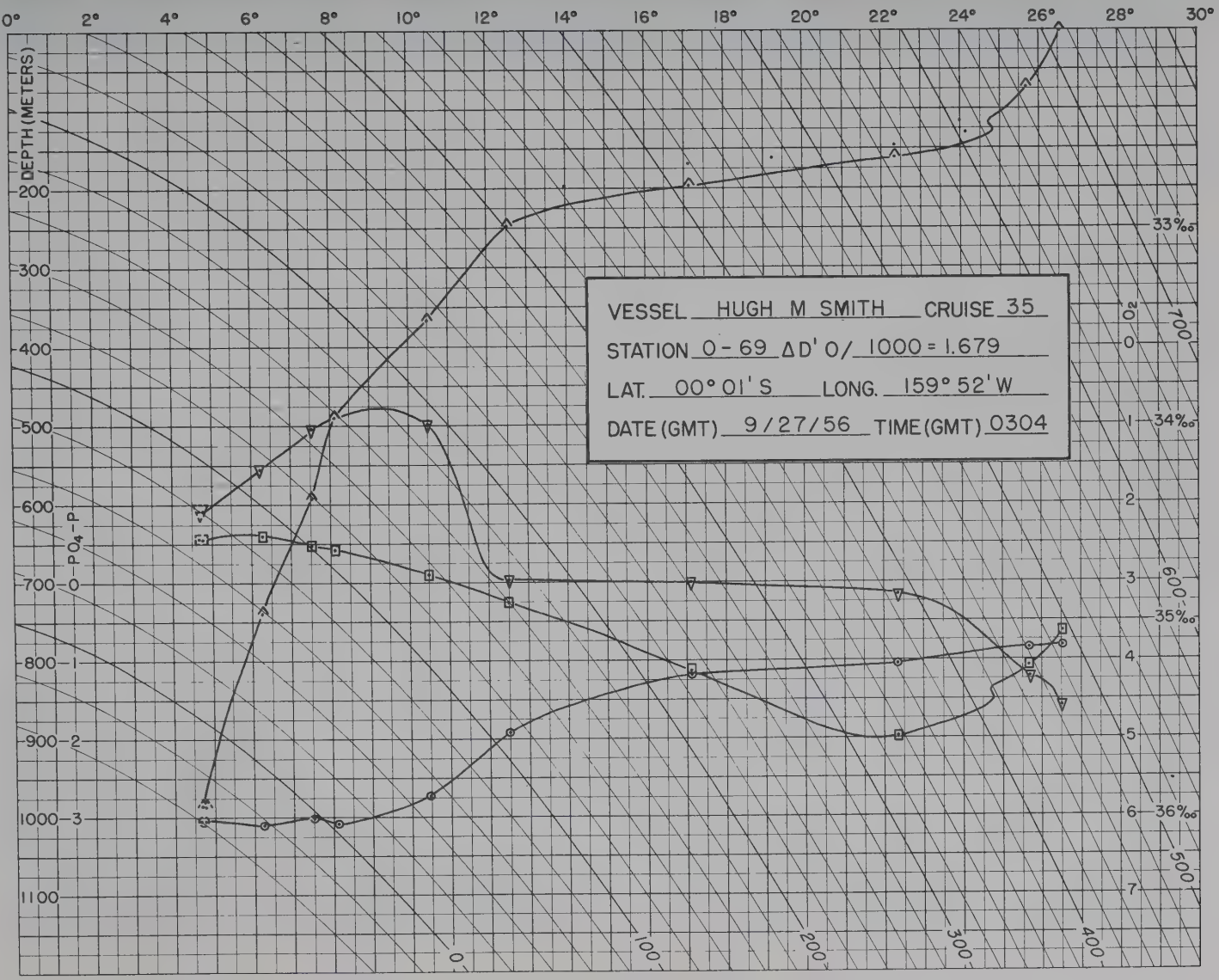

VESSEL HUGH M SMITH CRUISE 35
STATION 0-64 ΔD' O/ 1000 = 1.757
LAT. 08° 43' S LONG. 159° 53' W
DATE(GMT) 9/24/56 TIME(GMT) 0935
DEPTH (METERS)
PO_4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

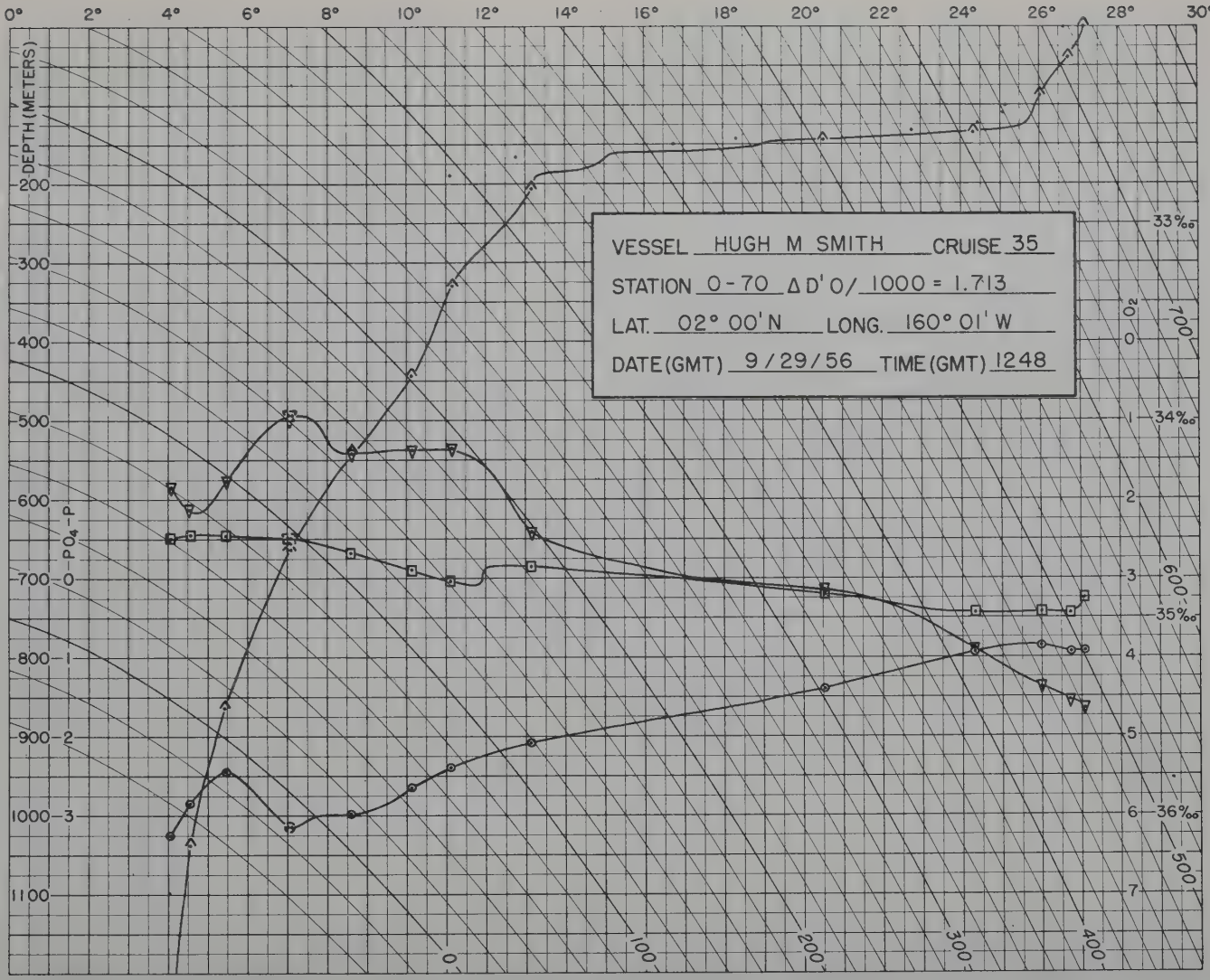

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
100
200
300
400
500
600
700
800
900
1000
1100
PO_4-P
0
1
2
3
VESSEL HUGH M SMITH CRUISE 35
STATION 0-65 ΔD' O/ 1000 = 1.822
LAT. 07° 02' S LONG. 159° 59' W
DATE (GMT) 9/24/56 TIME (GMT) 2229
33‰
34‰
35‰
36‰
O2
0
1
2
3
4
5
6
7
600
700
500
400
300
200
100
0

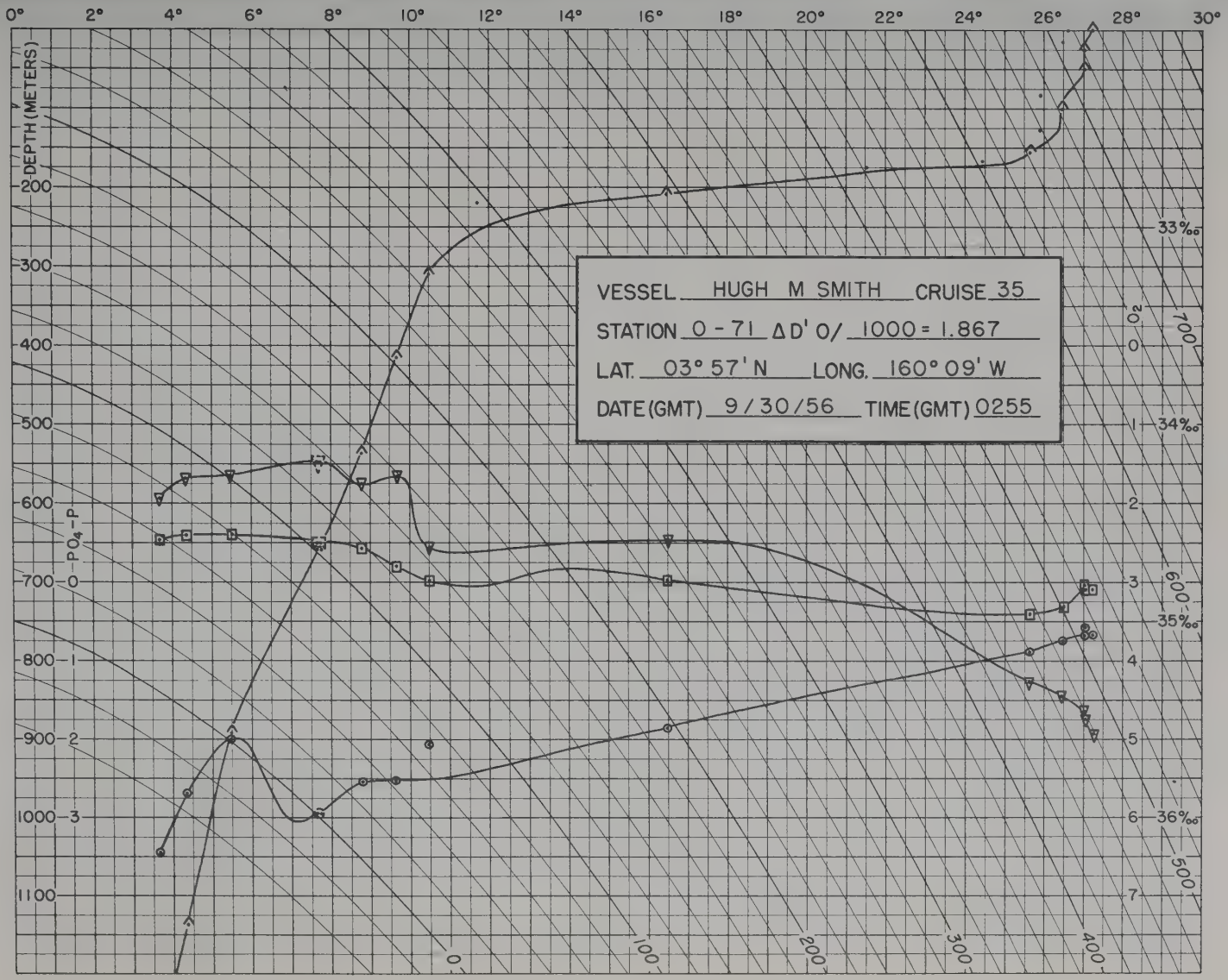

VESSEL HUGH M SMITH CRUISE 35
STATION 0-66 Δ D' O/ 1000 = 1.760
LAT. 05° 32' S LONG. 159° 58' W
DATE (GMT) 9/25/56 TIME (GMT) 1030
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

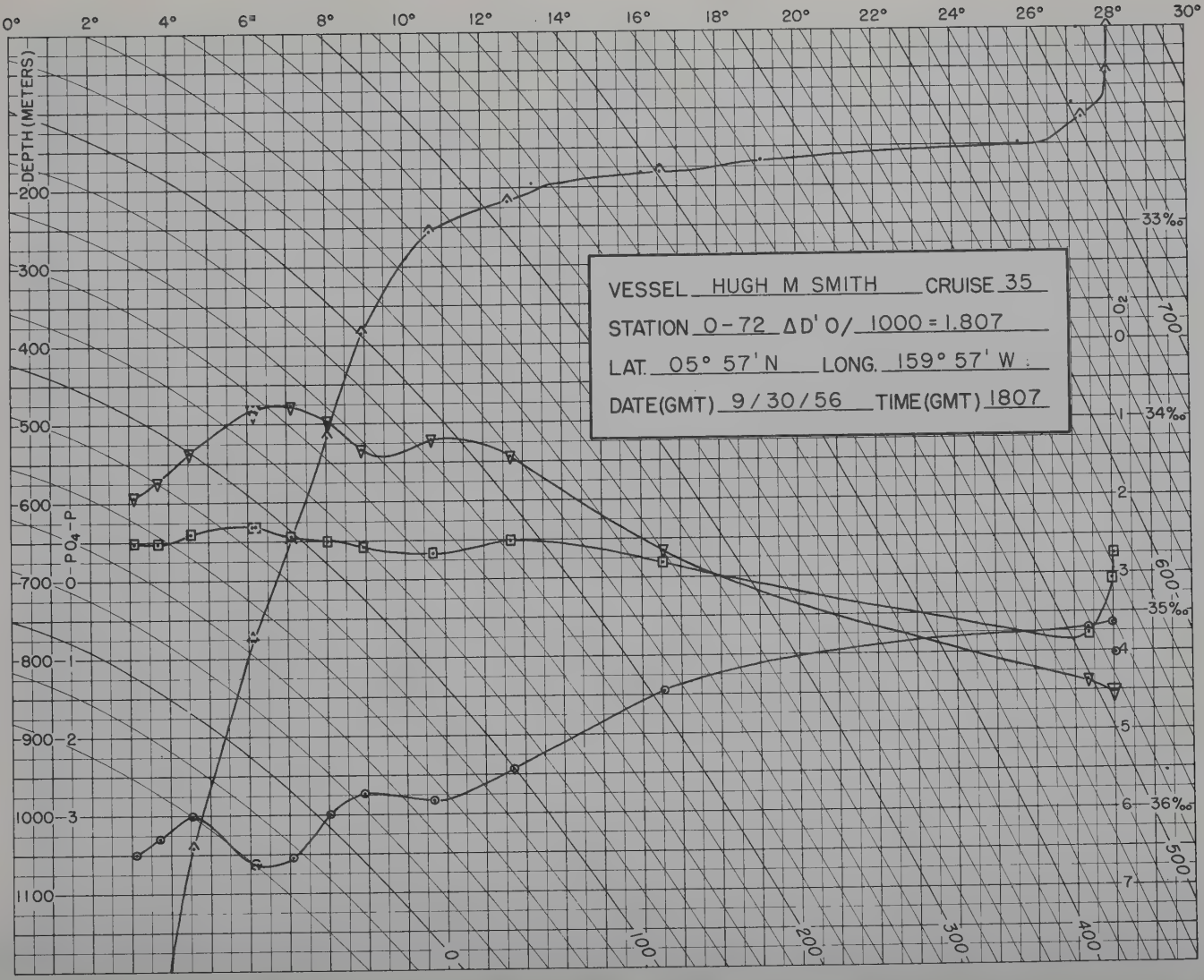

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
600
700
500
400
300
200
100
0
VESSEL HUGH M SMITH CRUISE 35
STATION 0-67 ΔD' O/ 1000 = 1.697
LAT. 04° 01' S LONG. 159° 59' W
DATE (GMT) 9/25/56 TIME (GMT) 2212

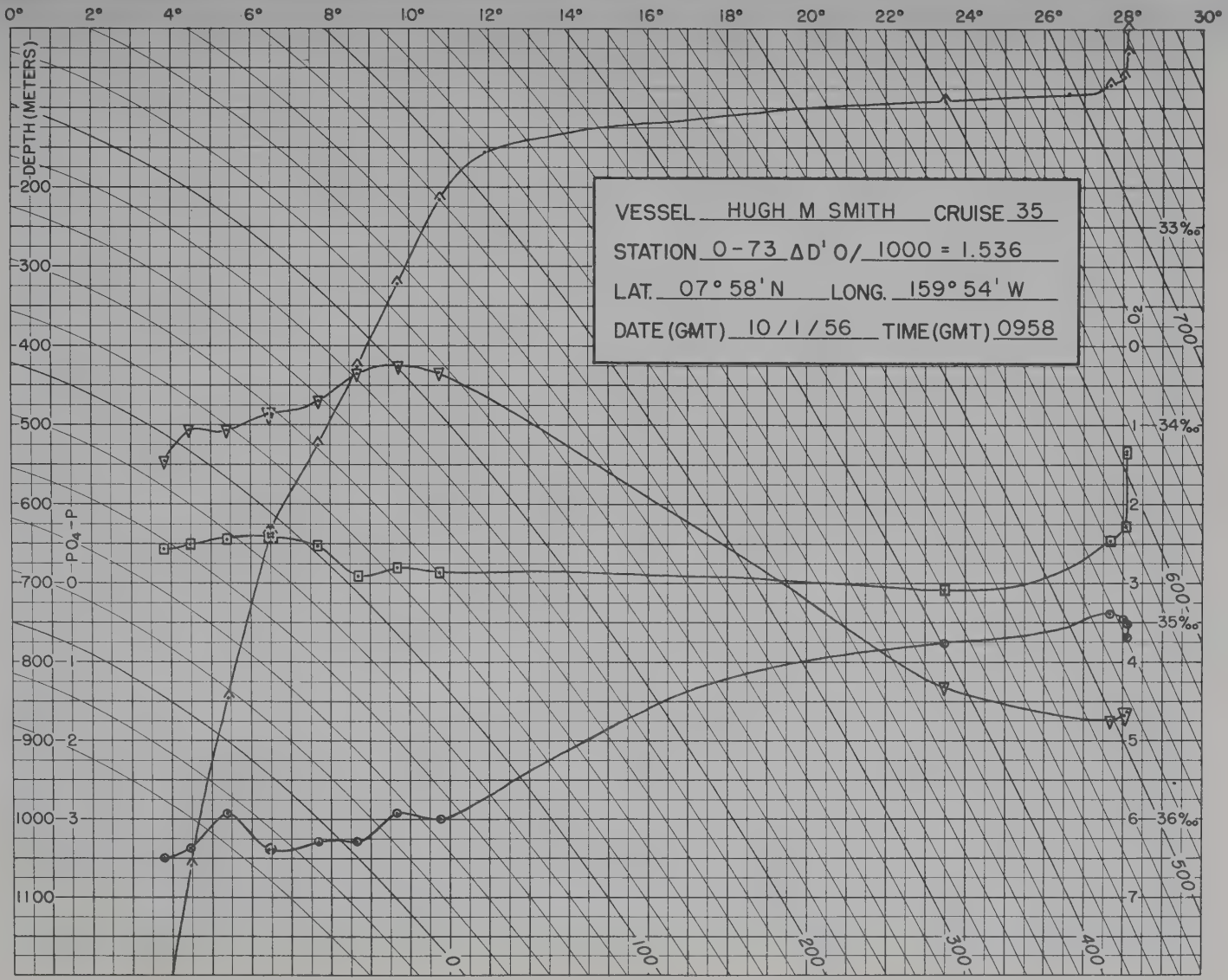

VESSEL HUGH M SMITH CRUISE 35
STATION 0-68 ΔD' O/ 1000 = 1.639
LAT. 02° 06' S LONG. 159° 57' W
DATE(GMT) 9/26/56 TIME(GMT) 1246
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

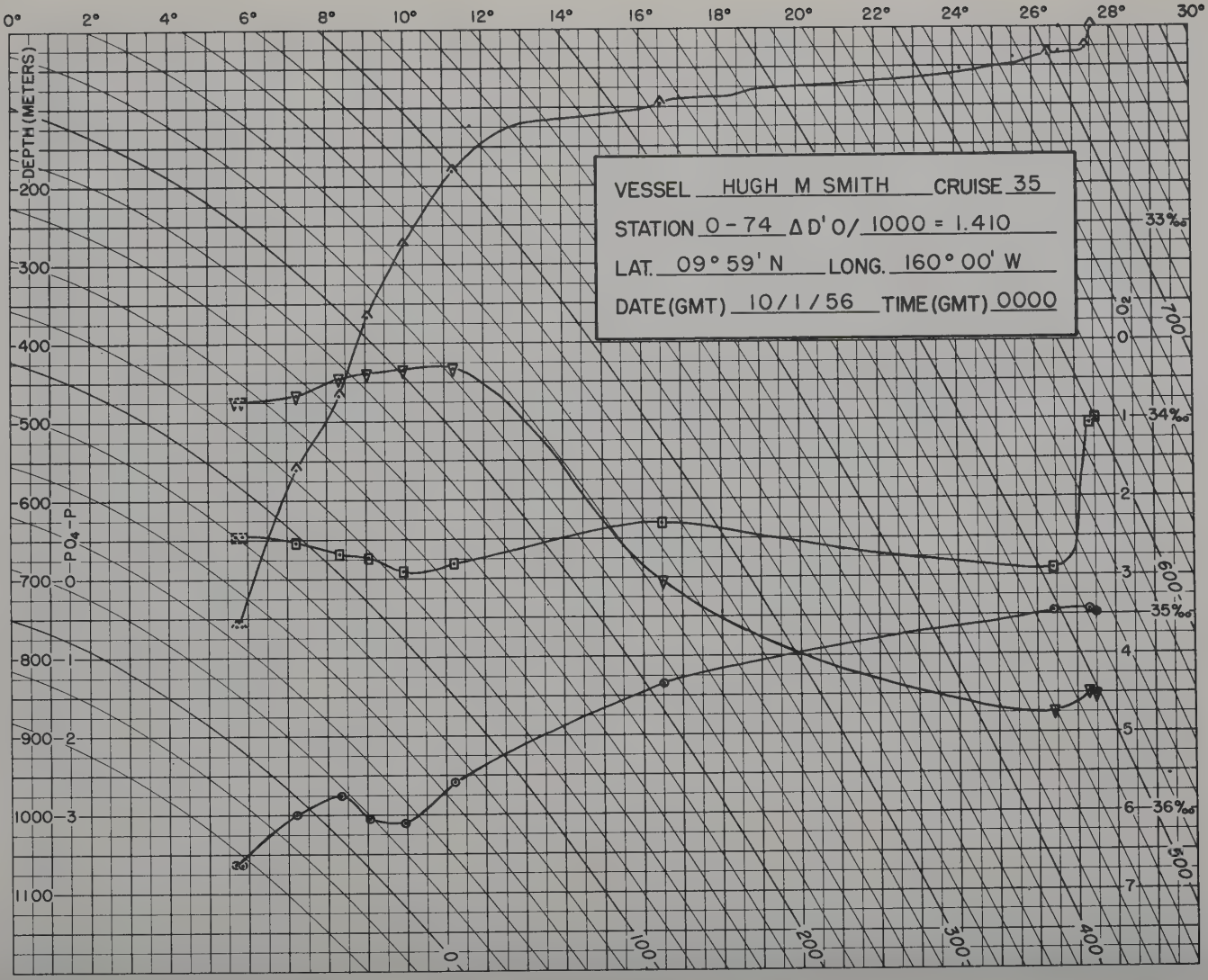

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
O2
700
600
500
0
100
200
300
400
VESSEL HUGH M SMITH CRUISE 35
STATION 0-69 ΔD' O/ 1000 = 1.679
LAT. 00° 01' S LONG. 159° 52' W
DATE (GMT) 9/27/56 TIME (GMT) 0304

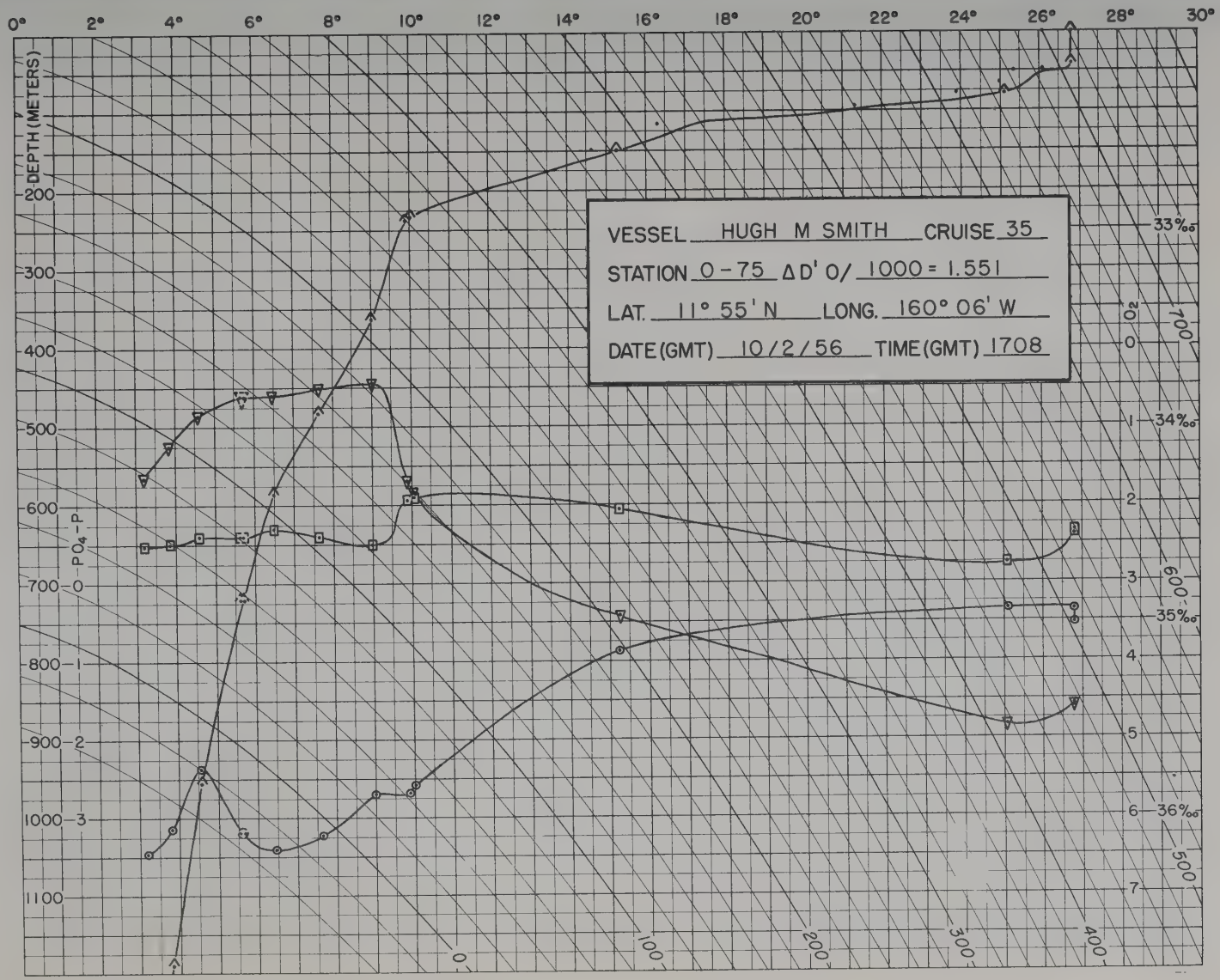

VESSEL HUGH M SMITH CRUISE 35
STATION 0-70 Δ D' O/ 1000 = 1.713
LAT. 02° 00' N LONG. 160° 01' W
DATE (GMT) 9/29/56 TIME (GMT) 1248
DEPTH (METERS)
PO4-P
O2
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰

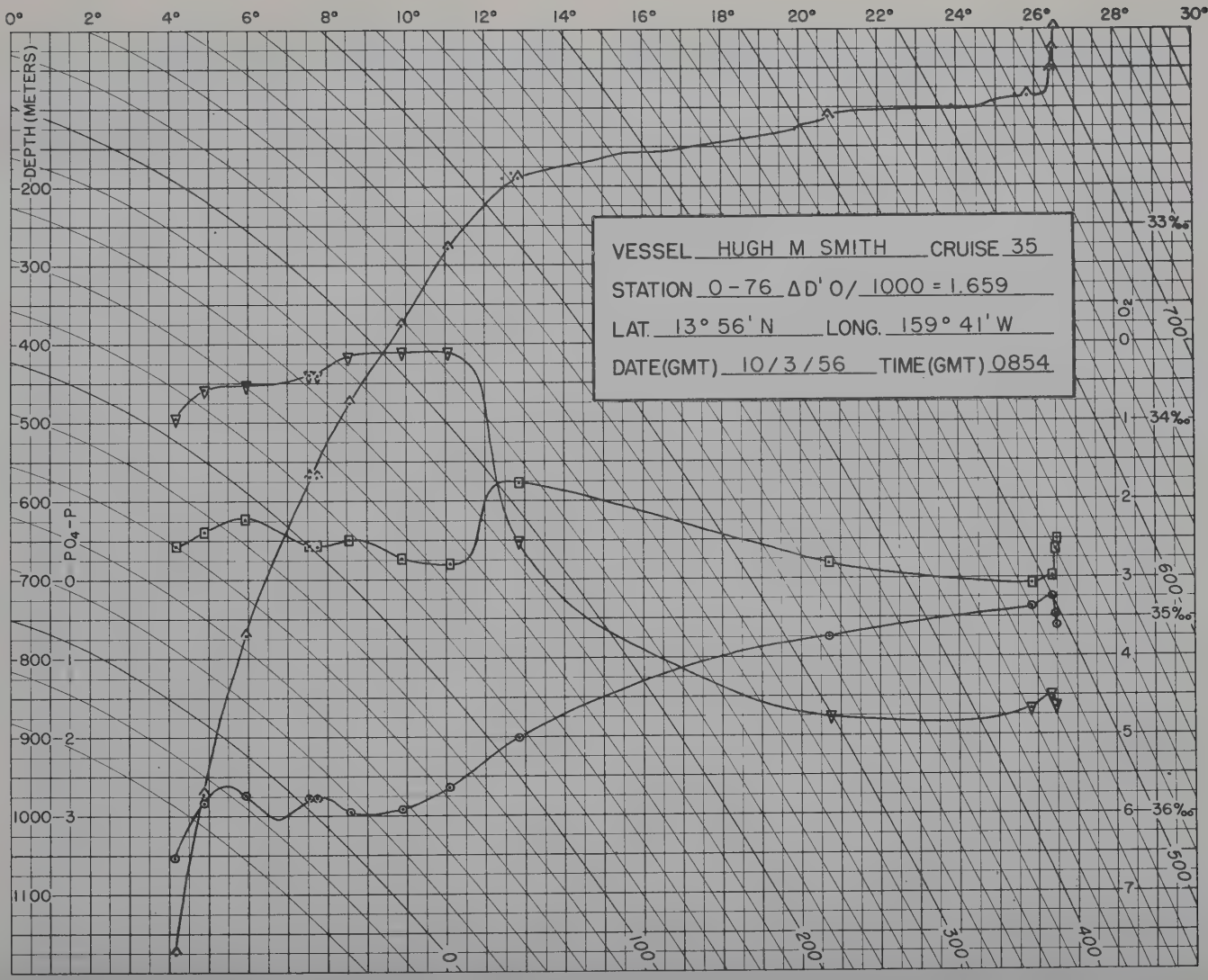

VESSEL HUGH M SMITH CRUISE 35
STATION 0-71 ΔD' O/ 1000 = 1.867
LAT. 03° 57' N LONG. 160° 09' W
DATE (GMT) 9/30/56 TIME (GMT) 0255
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰

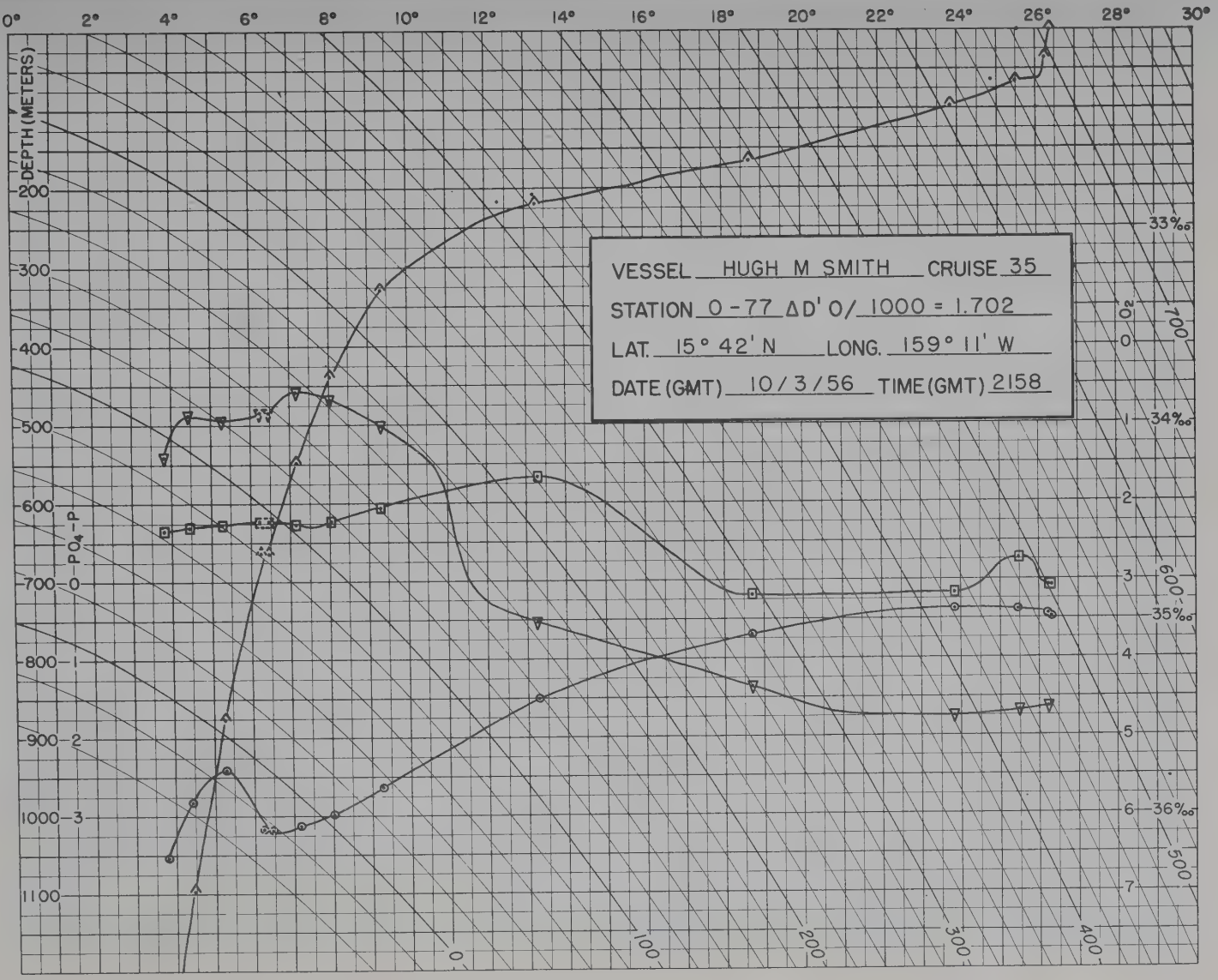

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-72 ΔD' O/ 1000 = 1.807
LAT. 05° 57' N LONG. 159° 57' W
DATE(GMT) 9/30/56 TIME(GMT) 1807

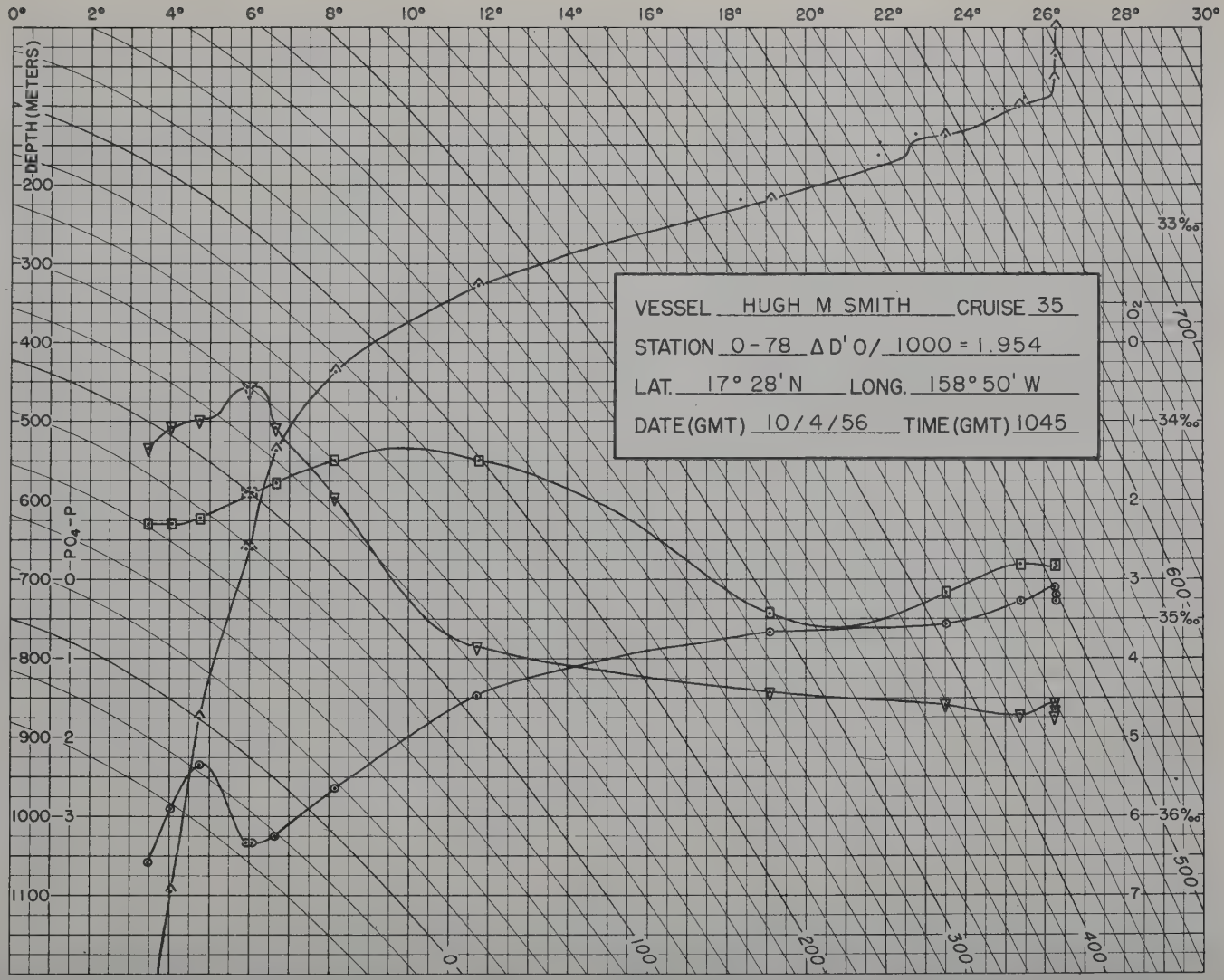

VESSEL HUGH M SMITH CRUISE 35
STATION 0-73 ΔD' O/ 1000 = 1.536
LAT. 07° 58' N LONG. 159° 54' W
DATE (GMT) 10/1/56 TIME (GMT) 0958
DEPTH (METERS)
PO4-P
0°
2°
4°
6°
8°
10°
12°
14°
16°
18°
20°
22°
24°
26°
28°
30°
33‰
34‰
35‰
36‰


VESSEL HUGH M SMITH CRUISE 35
STATION 0-74 ΔD'O/1000 = 1.410
LAT. 09° 59' N LONG. 160° 00' W
DATE (GMT) 10/1/56 TIME (GMT) 0000
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰


VESSEL HUGH M SMITH CRUISE 35
STATION 0-75 ΔD' O/ 1000 = 1.551
LAT. 11° 55' N LONG. 160° 06' W
DATE (GMT) 10/2/56 TIME (GMT) 1708
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰


VESSEL HUGH M SMITH CRUISE 35
STATION 0-76 ΔD' O/ 1000 = 1.659
LAT. 13° 56' N LONG. 159° 41' W
DATE(GMT) 10/3/56 TIME(GMT) 0854
DEPTH (METERS)
PO4-P
0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
33‰
34‰
35‰
36‰


0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
4
5
6
7
33‰
34‰
35‰
36‰
0
100
200
300
400
500
600
700
VESSEL HUGH M SMITH CRUISE 35
STATION 0-77 ΔD' 0/1000 = 1.702
LAT. 15° 42' N LONG. 159° 11' W
DATE (GMT) 10/3/56 TIME (GMT) 2158


VESSEL HUGH M SMITH CRUISE 35
STATION 0-78 ΔD'O/1000 = 1.954
LAT. 17° 28' N LONG. 158° 50' W
DATE (GMT) 10/4/56 TIME (GMT) 1045
DEPTH (METERS)
PO4-P
O2
33‰
34‰
35‰
36‰

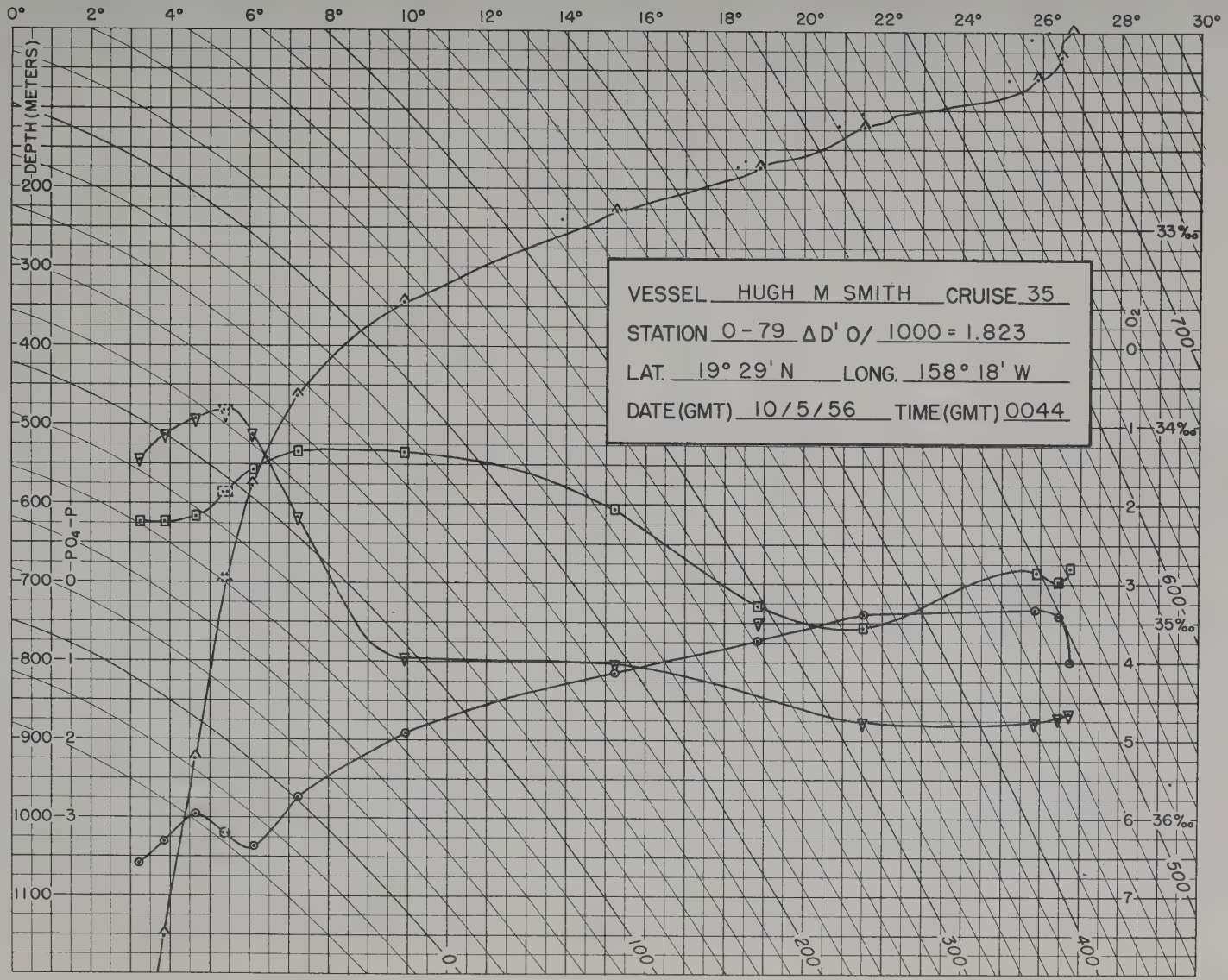

0° 2° 4° 6° 8° 10° 12° 14° 16° 18° 20° 22° 24° 26° 28° 30°
DEPTH (METERS)
100
200
300
400
500
600
700
800
900
1000
1100
PO4-P
0
1
2
3
33‰
34‰
35‰
36‰
O2
0
1
2
3
4
5
6
7
700
600
500
400
300
200
100
0
VESSEL HUGH M SMITH CRUISE 35
STATION 0-79 ΔD' O/ 1000 = 1.823
LAT. 19° 29' N LONG. 158° 18' W
DATE (GMT) 10/5/56 TIME (GMT) 0044

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35, recorded on U.S.N.H.O. Log Sheet B; for coded values see H.O. Pub. 606-C (Rev. 2.56)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
1	0430	8/2	21°13'N	157°51'W	78.2	040	26	78.1	73.2	1016	02	8	2	9	3	-
2	0805	8/2	21°02'N	157°54'W	78.7	040	20	77.6	72.8	1015	00	X	X	X	3	-
3	1106	8/2	21°04'N	158°03'W	78.9	140	24	78.5	73.2	1016	00	X	X	X	3	-
4	1315	8/2	21°14'N	158°00'W	77.7	070	18	77.8	72.8	1016	01	1	8	7	2	-
5	1650	8/2	21°03'N	158°16'W	77.5	060	20	78.1	72.0	1016	02	8	1	9	3	-
6	1947	8/2	20°54'N	158°27'W	78.0	050	20	79.0	73.5	1016	01	8	1	9	3	-
7	2259	8/2	21°07'N	158°30'W	78.8	070	22	78.0	73.5	1018	02	8	1	7	3	-
8	0050	8/3	21°11'N	158°23'W	78.8	060	22	81.8	72.2	1014	02	8, 9, 5	1	9	3	-
9	0250	8/3	21°14'N	158°13'W	81.8	050	19	80.1	69.9	1014	02	8	1	9	4	-
10	0545	8/3	21°24'N	158°16'W	78.4	060	14	78.0	73.8	1015	01	4	2	9	3	-
11	0945	8/3	21°18'N	158°25'W	78.9	060	16	78.8	69.8	1016	00	X	X	X	3	-
12	1105	8/3	21°16'N	158°38'W	78.5	060	14	78.0	70.0	1014	00	X	X	X	3	-
13	1435	8/3	21°24'N	158°39'W	78.7	040	14	78.0	72.0	1014	00	X	X	X	3	-
14	1710	8/3	21°23'N	158°54'W	78.4	050	21	78.1	72.0	1016	03	8	6	8	3	-
15	1941	8/3	21°25'N	159°07'W	78.1	090	30	79.6	73.5	1016	01	8	4	9	4	-
16	2158	8/3	21°36'N	159°06'W	78.5	040	14	78.0	73.8	1016	03	5, 8	5	8	4	-
17	0012	8/4	21°34'N	158°57'W	79.0	060	22	77.0	72.0	1015	25	5, 8	2	7	4	-
18	0223	8/4	21°34'N	158°47'W	79.0	060	22	78.1	73.0	1015	01	8	2	7	4	-
19	0410	8/4	21°32'N	158°36'W	78.5	050	23	78.0	72.4	1016	02	4	2	8	3	-
20	0605	8/4	21°28'N	158°35'W	78.3	060	20	77.8	73.0	1016	01	X	1	7	4	-
21	0905	8/4	21°31'N	158°24'W	78.5	050	18	78.0	71.2	1016	00	X	X	7	3	-
22	1135	8/4	21°38'N	158°15'W	77.6	060	16	77.0	71.8	1015	02	X	5	7	2	-
23	1416	8/4	21°46'N	158°24'W	77.5	060	20	76.7	72.0	1015	02	X	X	X	3	-
24	1605	8/4	21°50'N	158°19'W	77.8	070	20	76.8	72.5	1016	01	5	2	8	3	-
25	1815	8/4	21°56'N	158°07'W	76.5	060	18	78.4	73.2	1017	03	8	7	8	3	-
26	2040	8/4	21°47'N	158°02'W	77.5	070	24	78.4	73.1	1017	02	8	7	8	5	-
27	2235	8/4	21°48'N	157°53'W	78.0	050	22	79.5	72.5	1016	02	8	7	7	4	-
28	0054	8/5	21°57'N	157°57'W	78.1	060	22	79.5	72.7	1015	02	8	7	7	4	-
29	0335	8/5	22°06'N	157°58'W	77.5	050	20	78.7	72.7	1015	02	6, 8	7	6	4	-
30	0520	8/5	22°16'N	158°00'W	76.5	070	20	79.1	72.7	1016	03	8	8	6	4	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
31	0936	8/5	22°16'N	157°48'W	76.5	070	20	77.5	72.2	1017	00	X	8	7	3	-
32	1236	8/5	22°05'N	157°48'W	76.4	070	16	76.0	72.2	1016	00	X	X	X	4	-
33	1504	8/5	21°54'N	157°49'W	76.4	070	18	76.0	72.5	1015	00	X	X	X	3	-
34	1700	8/5	21°46'N	157°43'W	76.4	070	20	78.0	72.5	1016	01	6	7	8	3	-
35	1913	8/5	21°40'N	157°48'W	76.6	070	18	78.0	72.3	1018	02	5	8	8	2	-
36	2111	8/5	21°32'N	157°39'W	77.5	070	18	78.2	73.7	1017	02	8	8	8	3	-
37	2337	8/5	21°39'N	157°32'W	77.8	070	20	78.5	72.5	1017	01	6, 8	6	7	3	-
38	0155	8/6	21°30'N	157°28'W	77.5	070	18	78.9	72.7	1015	02	2, 8	5	8	3	-
39	0336	8/6	21°30'N	157°19'W	77.8	070	18	78.5	72.5	1015	02	1, 2, 8	4	8	3	-
40	0545	8/6	21°19'N	157°17'W	77.8	070	20	77.8	72.8	1017	02	8,2	2	8	3	-
41	0812	8/6	21°19'N	157°26'W	76.8	050	25	77.4	71.7	1018	00	X	2	8	3	-
42	1050	8/6	21°23'N	157°35'W	77.0	070	16	77.5	74.0	1018	00	X	X	X	3	-
43	1313	8/6	21°11'N	157°34'W	77.0	070	22	77.0	72.0	1017	00	X	X	X	3	-
44	1607	8/6	21°13'N	157°43'W	77.2	060	18	77.0	71.5	1017	03	1, 8	3	8	3	-
45	1810	8/6	21°07'N	157°43'W	77.4	030	18	78.0	72.4	1018	03	8,	6	8	3	-
46	0455	8/9	18°60'N	154°32'W	79.0	060	16	79.2	73.0	1014	02	1, 2, 8	5	8	1	-
47	0605	8/9	19°00'N	154°30'W	78.8	060	10	78.0	73.2	1014	02	X	4	8	1	-
48	1000	8/9	18°52'N	154°04'W	78.0	080	20	76.5	72.8	1015	02	X	X	X	3	34.63
49	1254	8/9	18°45'N	153°38'W	77.8	080	20	78.5	71.3	1013	00	X	X	8	3	-
50	1600	8/9	18°37'N	153°11'W	77.1	070	15	78.2	69.9	1014	00	8,1,2, 6	6	7	1	-
51	1900	8/9	18°29'N	152°45'W	77.8	030	14	78.3	71.5	1015	01	8, 1, 2	2	7	2	-
52	2200	8/9	18°21'N	152°19'W	77.7	060	14	78.1	71.9	1014	02	8	2	8	2	-
53	0045	8/10	18°08'N	151°54'W	77.9	060	15	78.8	72.9	1014	03	6, 8	8	8	3	-
54	0120	8/10	18°07'N	151°52'W	78.1	080	16	78.8	73.3	1014	03	6, 8	8	8	3	34.79
55	0500	8/10	17°56'N	151°24'W	77.5	060	22	78.0	74.0	1015	02	5, 8	7	8	3	-
56	0830	8/10	17°48'N	151°02'W	77.6	080	13	78.0	74.2	1016	02	X	X	X	3	-
57	1130	8/10	17°37'N	150°37'W	76.9	080	14	76.7	73.9	1015	02	X	7	6	4	-
58	1430	8/10	17°26'N	150°12'W	76.8	070	17	78.8	72.8	1015	02	8, 6	7	7	3	-
59	1730	8/10	17°15'N	149°47'W	76.6	060	15	77.2	73.1	1016	02	8, 6	7	7	3	-
60	2030	8/10	17°04'N	149°22'W	76.8	060	15	78.0	72.9	1017	02	6, 3, 8	7	8	3	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
61	2326	8/10	16°53'N	148°55'W	77.0	140	30	77.0	73.1	1016	02	4, 8	7	7	3	-
62	0045	8/11	16°50'N	148°42'W	76.4	040	16	77.0	74.0	1016	16	8, 4	5	7	4	-
63	0125	8/11	16°49'N	148°41'W	76.6	040	15	77.0	73.7	1016	15	8, 4	5	7	4	34.65
64	0500	8/11	16°45'N	148°17'W	76.3	040	18	76.8	73.6	1015	25	8, 4, 7	7	7	4	-
65	0800	8/11	16°41'N	147°52'W	76.6	050	20	77.0	74.0	1016	25	X	8	7	5	-
66	1100	8/11	16°38'N	147°27'W	76.0	060	16	77.0	74.2	1015	01	X	2	7	5	-
67	1400	8/11	16°34'N	147°03'W	76.4	060	17	76.9	73.8	1014	02	X	2	7	4	-
68	1700	8/11	16°31'N	146°39'W	76.2	070	20	76.0	73.8	1015	02	8, 4	3	8	4	-
69	2000	8/11	16°27'N	146°15'W	75.8	080	17	75.5	72.8	1016	03	8, 4	7	7	4	-
70	2300	8/11	16°19'N	145°49'W	76.5	040	20	77.0	73.0	1015	01	8, 1	2	7	2	-
71	0045	8/12	16°11'N	145°35'W	76.8	050	18	76.5	72.8	1014	03	8, 1	3	7	3	-
72	0125	8/12	16°11'N	145°34'W	76.8	050	23	75.3	72.0	1014	16	8, 1	5	7	3	34.79
73	0400	8/12	16°02'N	145°12'W	76.1	050	22	76.1	73.0	1015	16	5, 8	7	7	4	-
74	0700	8/12	15°49'N	144°55'W	75.6	030	19	75.8	71.9	1012	03	X	7	7	4	-
75	1000	8/12	15°37'N	144°31'W	75.5	050	18	75.3	72.0	1014	00	X	X	X	4	-
76	1300	8/12	15°23'N	144°07'W	75.6	040	20	75.8	70.5	1012	00	X	X	X	4	-
77	1600	8/12	15°10'N	143°43'W	76.7	040	21	76.3	72.0	1013	16	6	8	7	3	-
78	1900	8/12	14°56'N	143°20'W	78.0	030	18	76.1	73.0	1014	14	5, 6, 8	7	7	3	-
79	2200	8/12	14°43'N	142°57'W	77.7	050	18	78.0	75.0	1012	02	6, 8, 1	6	7	4	-
80	2345	8/12	14°40'N	142°44'W	78.1	050	18	78.0	75.3	1012	21	8	7	7	4	-
81	0055	8/13	14°39'N	142°42'W	78.2	020	21	77.5	74.8	1011	21	8	7	7	4	34.88
82	0400	8/13	14°33'N	142°11'W	78.2	020	24	75.8	75.0	1010	21	7	8	7	4	-
83	0700	8/13	14°27'N	141°51'W	78.2	020	24	78.0	76.0	1012	01	6	5	7	4	-
84	1000	8/13	14°19'N	141°26'W	78.5	040	18	78.0	75.8	1010	03	X	8	7	4	-
85	1300	8/13	14°12'N	141°00'W	79.2	050	23	79.5	76.0	1010	21	X	6	6	4	-
86	1605	8/13	14°04'N	140°35'W	79.1	070	23	76.8	75.5	1011	60	8	8	5	4	-
87	1900	8/13	13°59'N	140°10'W	78.8	080	21	80.2	76.8	1012	02	8, 6	7	7	4	-
88	2200	8/13	13°52'N	139°44'W	79.8	080	18	80.5	77.0	1012	01	1,2,4,8,9	5	7	3	-
89	2345	8/13	13°47'N	139°29'W	79.6	080	13	79.7	74.9	1011	16	1,2,4,8,9	4	7	2	-
90	0020	8/14	13°46'N	139°27'W	79.6	090	14	79.9	76.5	1011	16	1,2,4,8,9	4	7	2	34.83

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
91	0600	8/14	13°37'N	138°10'W	78.8	070	22	79.0	75.8	1013	16	0, 8	6	8	3	-
92	0900	8/14	13°29'N	138°34'W	78.7	080	14	77.0	75.0	1013	00	X	X	X	3	-
93	1200	8/14	13°21'N	138°08'W	80.5	050	15	79.0	74.0	1012	00	8	X	7	3	-
94	1500	8/14	13°13'N	137°44'W	79.8	040	14	79.2	74.0	1012	15	8, 6, 2	7	7	2	-
95	1800	8/14	13°04'N	137°19'W	79.8	030	17	77.9	75.4	1914	15	2, 4, 8	6	7	3	-
96	2100	8/14	12°57'N	137°00'W	80.3	040	15	80.0	76.3	1011	15	8	6	6	3	-
97	0005	8/15	12°45'N	136°31'W	79.0	020	10	79.5	77.9	1009	15	8	8	6	3	-
98	0300	8/15	12°35'N	136°09'W	79.1	140	18	80.0	75.2	1012	15	8, 7, 4	7	7	3	-
99	0600	8/15	12°25'N	135°46'W	79.4	130	20	80.0	76.8	1014	15	7	8	7	3	-
100	0900	8/15	12°12'N	135°24'W	79.0	130	16	80.3	76.5	1015	01	8	2	8	2	-
101	1035	8/15	12°01'N	135°02'W	79.3	130	10	80.4	75.8	1014	03	X	8	7	2	-
102	1120	8/15	12°00'N	135°00'W	79.4	110	10	80.0	75.6	1013	00	X	X	7	2	34.65
103	1500	8/15	11°30'N	135°00'W	79.8	050	06	80.0	76.0	1014	25	8	6	7	2	-
104	1800	8/15	10°59'N	135°00'W	79.2	120	05	80.5	76.0	1015	01	9, 3, 4	2	8	2	-
105	2100	8/15	10°28'N	135°00'W	80.4	060	14	81.0	76.2	1014	03	8, 5, 1	4	7	2	-
106	2330	8/15	10°02'N	134°56'W	80.5	060	12	79.5	76.5	1012	15	0, 8, 9, 5	7	7	2	-
107	0010	8/16	09°59'N	134°56'W	80.5	080	22	77.1	75.0	1012	25	8, 5	7	6	2	34.18
108	0730	8/16	09°26'N	134°49'W	80.5	030	20	80.1	76.0	1015	01	8	1	7	3	-
109	1030	8/16	08°58'N	134°47'W	80.3	060	19	80.0	75.7	1012	02	8	1	7	3	-
110	1330	8/16	08°28'N	134°39'W	80.5	040	17	80.2	75.5	1011	03	X	X	7	3	-
111	1630	8/16	07°58'N	134°39'W	80.8	080	10	79.3	76.0	1012	15	6, 8	6	7	1	-
112	1755	8/16	07°58'N	134°39'W	80.9	090	10	82.3	76.9	1013	15	6, 8, 5	6	7	2	33.95
113	2100	8/16	07°20'N	134°36'W	80.7	110	05	81.5	76.6	1012	02	1, 4, 8	6	7	2	-
114	0000	8/17	06°57'N	134°37'W	80.0	150	08	76.8	74.8	1010	80	8	8	6	2	-
115	0300	8/17	06°34'N	134°38'W	79.9	150	10	75.0	74.0	1011	80	8	8	6	3	-
116	0705	8/17	06°11'N	134°40'W	80.0	150	16	79.8	75.2	1012	80	8	8	6	2	-
117	0835	8/17	06°09'N	134°39'W	80.0	150	18	79.5	75.0	1012	15	X	8	6	3	34.83
118	1200	8/17	05°45'N	134°41'W	80.0	150	14	78.0	75.2	1010	00	X	X	X	3	-
119	1500	8/17	05°23'N	134°43'W	78.8	130	24	78.8	72.8	1011	00	8, 6, 1	6	7	4	-
120	1800	8/17	05°01'N	134°45'W	78.7	110	21	78.8	73.8	1012	01	8, 9, 5	4	7	3	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
121	2100	8/17	04°39'N	134°47'W	77.0	140	18	79.1	74.1	1012	02	8	4	7	3	35.03
122	0000	8/18	04°21'N	134°58'W	77.0	110	20	78.2	73.2	1010	02	8	2	7	3	34.97
123	0115	8/18	04°13'N	135°04'W	77.0	120	18	78.0	73.3	1010	15	8, 6, 9	7	7	2	-
124	0345	8/18	04°15'N	135°07'W	76.6	120	17	77.9	72.5	1012	01	X	2	7	2	35.01
125	0900	8/18	03°46'N	135°07'W	76.8	110	20	77.9	74.2	1014	00	X	X	X	3	-
126	1200	8/18	03°25'N	135°09'W	77.0	120	14	77.8	73.7	1012	03	6, 2	5	7	2	-
127	1500	8/18	03°03'N	135°10'W	77.0	110	15	77.4	72.3	1012	02	8, 2	4	7	2	34.90
128	1800	8/18	02°42'N	135°12'W	77.0	090	18	79.8	74.2	1015	03	8, 1	5	7	2	34.90
129	2100	8/18	02°20'N	135°14'W	77.5	120	18	79.0	73.0	1014	02	5, 8	4	7	2	34.94
130	0050	8/19	02°01'N	135°12'W	77.6	080	17	78.4	74.0	1011	03	8, 2	6	7	2	34.88
131	0120	8/19	01°59'N	135°14'W	77.7	080	18	78.2	74.8	1010	01	1, 8, 2	5	7	2	-
132	0430	8/19	01°36'N	135°14'W	78.0	090	18	77.4	75.0	1012	00	X	X	X	3	-
133	0900	8/19	01°07'N	135°12'W	76.4	100	17	77.8	73.8	-	00	X	X	7	3	34.90
134	1200	8/19	00°42'N	135°12'W	76.3	090	14	77.0	72.6	1012	02	8	2	7	2	34.97
135	1500	8/19	00°17'N	135°11'W	75.8	110	16	76.5	72.8	1014	03	8, 4	5	7	2	35.01
136	1745	8/19	00°02'N	134°59'W	75.8	110	18	78.0	72.2	1016	03	8, 4, 1	7	7	2	-
137	1930	8/19	00°07'S	134°52'W	75.8	110	18	79.6	73.6	1015	01	8, 3	2	7	3	35.05
138	0300	8/20	00°43'S	134°52'W	76.0	120	18	78.7	74.0	1013	02	8, 3	2	7	3	35.07
139	0700	8/20	01°12'S	134°55'W	75.8	110	17	76.8	73.5	1015	01	8	1	7	3	35.17
140	1020	8/20	01°46'S	134°53'W	76.3	110	20	76.3	73.0	1013	00	X	X	7	2	35.39
141	1248	8/20	02°11'S	134°52'W	76.5	110	18	76.5	72.4	1012	01	8, 4	2	7	2	-
142	1410	8/20	02°14'S	134°52'W	76.5	100	20	76.2	71.8	1014	00	8	1	7	2	35.44
143	1730	8/20	02°46'S	134°53'W	76.8	090	16	79.2	73.6	1016	02	8	2	7	2	35.53
144	2030	8/20	03°16'S	134°54'W	77.3	110	18	78.5	74.2	1015	03	8	6	7	3	35.57
145	2330	8/20	03°46'S	134°56'W	76.9	090	18	78.7	74.0	1012	01	8	3	7	3	35.57
146	0045	8/21	03°59'S	134°57'W	77.3	120	10	77.7	74.9	1012	01	8	1	7	2	-
147	0130	8/21	04°01'S	134°58'W	77.4	130	12	77.4	73.8	1013	01	8	1	7	2	35.55
148	0658	8/21	04°40'S	134°57'W	76.8	130	12	77.8	73.5	1016	03	8	2	7	2	35.57
149	0900	8/21	05°00'S	134°59'W	76.6	110	13	77.2	72.1	1015	02	8	2	7	2	35.55
150	1220	8/21	05°33'S	135°02'W	77.2	120	10	77.2	73.0	1013	02	8	2	7	2	35.43

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
151	1332	8/21	05°35'S	135°02'W	77.2	120	10	77.0	73.1	1013	02	8	2	7	2	-
152	1630	8/21	06°05'S	135°02'W	77.7	080	11	77.8	73.2	1015	01	8	1	7	2	-
153	1930	8/21	06°28'S	135°01'W	76.9	090	15	78.3	73.8	1016	03	8, 6	2	7	2	-
154	2230	8/21	06°57'S	135°02'W	77.7	090	14	78.6	73.5	1014	01	8, 4	1	7	2	-
155	2305	8/21	06°59'S	135°02'W	77.9	120	13	78.0	73.5	1013	01	8, 4	1	7	2	35.41
156	0300	8/22	07°32'S	135°03'W	77.9	120	13	77.0	74.0	1013	03	8, 4	7	7	3	-
157	0710	8/22	07°58'S	135°02'W	77.8	100	10	77.6	72.5	1014	01	8	1	7	3	-
158	0945	8/22	08°25'S	135°04'W	77.6	090	18	76.5	72.8	1014	02	X	2	7	3	-
159	1020	8/22	08°28'S	135°04'W	77.5	090	18	76.5	72.8	1013	02	X	2	7	3	35.25
160	1330	8/22	08°52'S	135°05'W	77.0	090	19	75.8	72.0	1012	02	8	2	7	3	-
161	1630	8/22	09°20'S	135°04'W	75.2	100	21	75.2	72.8	1015	03	8	7	7	3	-
162	2020	8/22	09°55'S	135°01'W	77.3	080	19	78.0	74.8	1015	01	8	1	7	2	-
163	2120	8/22	09°57'S	135°00'W	77.5	070	20	79.8	75.2	1014	03	8	3	7	2	35.57
164	0300	8/23	10°24'S	135°09'W	76.8	090	18	77.3	71.2	1014	03	8	5	7	3	-
165	0700	8/23	10°52'S	135°06'W	77.4	110	13	77.0	72.3	1015	01	8	2	7	2	-
166	1100	8/23	11°34'S	135°05'W	77.3	090	16	76.5	72.3	1014	03	8, 6	4	7	2	-
167	1140	8/23	11°37'S	135°05'W	77.2	080	15	76.3	72.3	1014	03	8, 6	4	7	2	35.71
168	1515	8/23	12°10'S	135°04'W	77.1	090	16	76.0	73.0	1015	02	8, 4	4	7	3	-
169	1815	8/23	12°32'S	135°00'W	77.2	100	16	77.9	72.0	1017	01	8, 2	2	7	3	-
170	2045	8/23	12°56'S	134°58'W	77.0	110	16	77.1	72.6	1016	02	8, 2	2	7	2	-
171	2125	8/23	12°58'S	134°58'W	77.1	090	18	77.0	72.2	1016	02	8, 2	2	7	2	35.75
172	0030	8/24	13°27'S	135°00'W	77.5	120	9	77.2	68.9	1014	01	8, 4	1	7	2	-
173	0330	8/24	14°00'S	135°02'W	76.4	080	9	76.8	71.5	1015	02	6	1	7	1	-
174	0715	8/24	14°23'S	135°00'W	76.4	040	10	76.3	69.9	1016	03	8, 5	2	7	1	-
175	0800	8/24	14°26'S	135°00'W	76.4	070	10	76.0	71.8	1016	03	8, 5	3	7	1	36.18
176	1200	8/24	14°59'S	135°00'W	76.2	050	10	70.0	71.2	1015	02	8, 4	8	7	1	-
177	1500	8/24	15°26'S	135°00'W	76.4	050	05	75.2	68.9	1016	01	8, 4	5	7	1	-
178	1800	8/24	15°49'S	134°57'W	76.6	090	09	72.1	71.0	1018	81	8	6	4	1	-
179	1900	8/24	15°58'S	134°57'W	75.8	060	09	74.1	70.8	1018	15	8, 4	8	6	2	-
180	1940	8/24	16°02'S	134°57'W	75.8	060	10	75.5	72.5	1017	15	8, 4	7	6	3	36.15

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
181	2245	8/24	16°28'S	134°58'W	76.2	050	08	76.5	73.2	1015	15	6, 8	7	7	2	-
182	0145	8/25	17°00'S	134°58'W	75.6	040	14	76.3	71.2	1014	15	6, 8	7	7	2	-
183	0445	8/25	17°32'S	134°58'W	75.8	020	11	76.3	71.8	1015	03	X	8	7	1	-
184	0530	8/25	17°35'S	134°58'W	75.8	020	11	76.2	72.0	1016	03	X	8	7	1	36.49
185	1100	8/25	18°11'S	134°59'W	76.1	020	04	77.0	71.0	1015	00	X	X	X	1	-
186	1400	8/25	18°42'S	135°02'W	76.2	010	05	76.8	71.2	1014	03	8	1	7	1	-
187	1545	8/25	19°01'S	135°03'W	76.3	010	06	76.1	71.5	1015	02	6, 8	1	7	1	-
188	1625	8/25	19°04'S	135°03'W	76.3	020	11	76.3	72.3	1015	02	6, 8	1	7	1	36.53
189	2330	8/25	19°02'S	135°36'W	76.9	020	08	80.0	74.5	1014	02	2, 8	1	7	1	-
190	0230	8/26	19°04'S	136°16'W	76.3	050	07	77.0	74.0	1014	02	8, 4	2	7	1	-
191	0500	8/26	19°03'S	136°38'W	76.4	000	04	77.8	73.0	1015	02	X	1	7	1	-
192	0810	8/26	19°02'S	136°57'W	76.3	010	08	77.2	71.0	1016	03	4, 8	4	7	1	-
193	0852	8/26	19°02'S	136°59'W	76.2	010	14	76.8	71.9	1016	02	X	1	7	1	36.53
194	1200	8/26	19°00'S	137°29'W	75.8	350	16	75.9	71.8	1013	03	8	4	7	1	-
195	1500	8/26	18°58'S	138°01'W	76.5	310	17	76.0	70.0	1013	03	8, 4	6	7	1	-
196	1800	8/26	18°55'S	138°27'W	76.2	000	15	77.8	73.3	1014	01	8, 5	2	7	1	-
197	2130	8/26	19°00'S	139°01'W	76.9	290	16	77.0	75.0	1014	03	8, 6, 5	5	7	2	-
198	2210	8/26	19°01'S	139°01'W	76.9	330	18	78.2	73.2	1014	15	6, 8, 5	3	7	2	36.49
199	0200	8/27	19°01'S	139°33'W	76.8	300	24	78.0	72.0	1012	03	8, 5, 9	4	7	2	-
200	0700	8/27	19°00'S	140°09'W	76.8	320	15	78.0	73.2	1014	00	X	X	7	3	-
201	1000	8/27	18°59'S	140°39'W	76.4	320	17	77.8	72.5	1014	03	8	6	7	3	-
202	1210	8/27	18°58'S	141°00'W	76.5	320	17	77.5	72.0	1012	01	8	1	7	3	-
203	1245	8/27	18°58'S	141°02'W	76.4	320	18	77.0	74.5	1013	02	8	1	7	3	36.33
204	1600	8/27	18°58'S	141°29'W	76.3	320	18	77.9	73.2	1013	03	1, 8	6	7	3	-
205	1900	8/27	18°57'S	141°49'W	76.8	310	16	76.6	74.0	1015	03	8, 6	6	7	1	-
206	2200	8/27	18°56'S	142°19'W	75.4	310	17	78.2	74.0	1014	03	8, 6	5	7	2	-
207	0200	8/28	18°56'S	142°59'W	77.1	310	20	78.8	74.2	1012	01	8	1	7	2	-
208	0235	8/28	18°56'S	143°01'W	77.3	310	19	78.8	74.4	1013	02	8, 5	1	7	2	36.35
209	1000	8/28	18°25'S	142°57'W	76.3	310	15	77.8	73.5	1015	03	X	6	6	2	-
210	1300	8/28	17°54'S	142°53'W	76.9	290	14	77.4	72.4	1015	03	8, 6	8	6	1	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
211	1445	8/28	17°36'S	142°56'W	77.1	300	10	77.4	72.4	1015	01	8, 6	5	7	1	-
212	1525	8/28	17°33'S	142°56'W	77.3	310	09	78.2	72.1	1015	02	8, 6	5	7	1	36.40
213	1900	8/28	17°05'S	142°45'W	77.1	330	08	78.1	72.8	1018	02	5, 8	5	7	1	-
214	2200	8/28	16°36'S	142°41'W	77.5	330	08	80.0	72.5	1016	01	8	2	7	1	-
215	0100	8/29	16°12'S	142°53'W	80.0	350	08	83.1	75.0	1015	03	8	5	7	1	-
216	0155	8/29	16°03'S	142°58'W	78.9	350	08	80.0	70.9	1015	03	4, 8	6	7	1	-
217	0230	8/29	16°01'S	142°59'W	78.3	350	05	79.6	72.4	1015	02	4, 8	7	7	1	36.27
218	0700	8/29	15°35'S	143°00'W	77.9	070	09	78.0	71.6	1017	01	8	1	7	1	-
219	1000	8/29	15°06'S	143°03'W	77.6	070	10	78.0	71.8	1016	02	8	1	6	1	-
220	1305	8/29	14°37'S	143°04'W	77.8	080	11	77.3	73.0	1015	02	8	1	7	1	-
221	1350	8/29	14°34'S	143°05'W	77.8	070	11	76.8	71.4	1015	02	8	1	7	1	36.22
222	1700	8/29	14°06'S	143°05'W	77.7	070	16	78.5	73.5	1017	00	8	2	7	3	-
223	2030	8/29	13°38'S	143°05'W	78.2	080	14	80.1	72.3	1017	01	8	1	7	3	-
224	0010	8/30	13°02'S	143°05'W	78.2	090	18	82.0	74.0	1015	02	8	1	7	3	-
225	0045	8/30	12°59'S	143°05'W	78.1	100	18	79.1	74.0	1015	02	8	1	7	3	35.95
226	0430	8/30	12°26'S	143°04'W	78.2	080	10	78.8	73.5	1015	02	8	1	7	3	-
227	0830	8/30	12°00'S	143°02'W	77.6	090	18	78.7	74.8	1016	02	8	1	7	2	-
228	1235	8/30	11°21'S	143°01'W	78.8	090	20	77.8	71.8	1013	02	8	1	7	2	-
229	1320	8/30	11°18'S	143°01'W	78.7	080	20	77.7	72.3	1013	02	8	1	7	2	35.68
230	1645	8/30	10°49'S	143°01'W	78.5	100	20	78.9	72.8	1014	03	8	2	7	4	-
231	2000	8/30	10°24'S	143°00'W	78.7	100	20	78.6	73.3	1014	03	8	4	7	4	-
232	2215	8/30	10°03'S	142°58'W	78.9	100	20	78.9	75.5	1012	01	8	2	7	4	-
233	2245	8/30	10°00'S	142°58'W	78.9	080	20	79.1	73.0	1012	03	8	6	7	4	35.55
234	0400	8/31	09°33'S	143°03'W	80.0	060	19	78.0	72.8	1012	03	8	7	7	4	-
235	0900	8/31	08°55'S	143°01'W	78.8	060	18	80.3	77.0	1012	15	X	X	6	3	-
236	1250	8/31	08°18'S	143°04'W	78.4	060	18	79.0	74.0	1010	03	X	2	7	3	-
237	1325	8/31	08°16'S	143°04'W	78.4	080	16	79.0	73.9	1010	02	X	X	7	3	35.46
238	1645	8/31	07°49'S	143°00'W	78.2	090	21	79.2	73.4	1011	00	8	1	7	2	-
239	1945	8/31	07°30'S	143°01'W	77.8	060	24	80.0	73.3	1016	02	8	1	7	3	-
240	2250	8/31	07°02'S	143°02'W	78.9	090	17	81.7	75.2	1010	03	8	2	7	2	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
241	2235	8/31	07°00'S	143°02'W	78.8	080	15	79.2	75.2	1009	03	8	3	7	2	35.43
242	0330	9/1	06°30'S	143°04'W	78.8	080	15	79.9	75.0	1009	03	5, 8	6	7	3	-
243	0730	9/1	06°04'S	143°02'W	78.7	080	12	79.0	75.0	1011	00	X	X	X	3	-
244	1110	9/1	05°29'S	143°02'W	78.5	080	18	79.5	75.4	1010	00	X	X	7	3	-
245	1220	9/1	05°27'S	143°02'W	77.9	080	18	78.1	73.6	1010	00	X	X	7	3	35.44
246	1915	9/1	04°30'S	143°05'W	78.3	070	16	80.0	76.3	1012	00	8	2	7	2	-
247	2205	9/1	04°03'S	143°06'W	78.7	090	15	78.9	73.9	1010	03	8	3	7	2	-
248	2245	9/1	04°01'S	143°06'W	78.3	100	16	78.3	73.8	1010	02	8	3	7	2	35.50
249	0230	9/2	03°30'S	143°06'W	78.0	110	15	80.0	75.0	1008	03	4, 8	4	7	2	-
250	0715	9/2	02°56'S	143°04'W	77.8	110	15	78.5	74.0	1010	02	X	2	7	2	35.55
251	1030	9/2	02°25'S	143°06'W	77.7	070	18	78.4	73.2	1009	02	X	2	7	2	35.55
252	1325	9/2	01°56'S	143°08'W	77.6	110	15	77.5	73.1	1008	00	X	2	7	2	-
253	1435	9/2	01°54'S	143°09'W	77.6	110	15	77.3	73.0	1008	03	8	2	7	3	35.53
254	1730	9/2	01°24'S	143°08'W	77.4	080	16	78.2	73.9	1010	00	8	1	7	2	35.55
255	2030	9/2	00°53'S	143°08'W	77.8	090	15	78.8	75.2	1010	02	8	1	7	2	35.46
256	2300	9/2	00°28'S	143°05'W	77.9	090	13	77.9	73.8	1007	03	8	2	7	2	35.39
257	0145	9/3	00°01'S	143°03'W	77.5	100	17	78.0	75.1	1006	01	8	1	7	2	-
258	0250	9/3	00°02'N	143°02'W	77.4	080	14	78.0	75.2	1006	02	8	1	7	2	35.26
259	1000	9/3	00°24'N	143°05'W	76.8	090	15	78.8	75.4	1008	02	8	1	7	2	35.25
260	1300	9/3	00°55'N	143°03'W	76.9	110	13	77.6	75.2	1017	03	6	8	7	2	35.07
261	1600	9/3	01°27'N	143°02'W	78.2	110	15	78.9	75.2	1009	02	6, 8	8	7	2	-
262	1900	9/3	01°56'N	143°01'W	78.9	110	13	80.0	74.7	1010	02	6, 8	8	7	2	-
263	1940	9/3	01°58'N	143°00'W	78.9	120	16	79.0	74.6	1011	01	4, 8, 5	3	7	1	34.94
264	2315	9/3	01°59'N	143°33'W	79.1	140	16	79.2	74.0	1008	03	4, 8	4	7	1	34.94
265	0215	9/4	02°02'N	144°05'W	79.8	140	15	79.8	74.2	1008	02	4, 8	4	7	1	34.99
266	0445	9/4	02°03'N	144°32'W	80.0	160	14	78.9	74.6	1009	01	4, 6, 8	5	7	2	34.99
267	0830	9/4	01°59'N	144°59'W	79.9	160	14	79.5	75.8	1011	00	X	X	7	2	-
268	0900	9/4	01°59'N	145°02'W	79.9	120	15	79.1	76.1	1010	62	X	X	6	3	35.05
269	1200	9/4	01°58'N	145°28'W	79.8	310	16	79.0	76.9	1009	00	8	5	6	3	35.05
270	1500	9/4	01°56'N	146°01'W	80.2	100	19	78.9	76.2	1009	00	8	1	7	1	35.05

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
271	1800	9/4	01°56'N	146°34'W	80.6	100	20	80.0	77.8	1010	03	8	2	7	2	35.05
272	2010	9/4	01°56'N	146°58'W	80.4	120	18	80.7	78.0	1010	01	8	1	7	1	-
273	2125	9/4	01°56'N	147°02'W	80.4	110	16	81.5	78.0	1010	03	8, 1	6	7	1	35.08
274	0030	9/5	01°56'N	147°40'W	80.3	120	16	80.8	76.0	1008	02	8, 1	5	7	1	35.05
275	0330	9/5	01°57'N	148°14'W	81.0	120	14	80.5	76.0	1008	03	2, 8	7	7	2	-
276	0600	9/5	01°59'N	148°42'W	80.3	110	12	81.8	77.9	1010	00	X	X	X	2	35.05
277	0900	9/5	01°58'N	148°59'W	80.2	110	12	80.5	77.9	1011	00	X	X	7	2	-
278	1015	9/5	01°57'N	149°04'W	80.3	110	15	80.3	77.7	1010	00	X	X	7	2	35.07
279	1330	9/5	01°56'N	149°41'W	80.7	120	12	79.7	76.3	1010	00	8	1	7	1	35.07
280	1630	9/5	01°55'N	150°18'W	80.0	140	15	79.9	76.2	1011	03	8	4	7	1	35.05
281	1945	9/5	02°00'N	150°58'W	80.7	120	15	81.0	77.0	1012	01	8, 1	2	7	1	-
282	2100	9/5	02°00'N	151°03'W	80.4	120	14	81.2	77.5	1011	02	8, 1	2	7	1	35.03
283	0000	9/6	01°31'N	151°05'W	80.0	120	18	81.0	76.7	1010	02	8, 1	3	7	2	35.05
284	0300	9/6	01°00'N	151°09'W	79.8	120	20	78.8	75.6	1009	02	8	3	7	2	35.03
285	0800	9/6	00°27'N	151°07'W	79.0	090	15	79.0	75.2	1012	00	X	X	7	3	34.92
286	1145	9/6	00°13'S	151°12'W	78.3	110	16	78.1	75.2	1011	02	2	X	7	3	-
287	1255	9/6	00°16'S	151°15'W	77.4	090	18	78.0	76.4	1011	02	2	X	7	2	35.10
288	2030	9/6	00°50'S	151°25'W	77.3	100	08	79.0	76.5	1012	00	1, 4, 8	3	7	2	35.14
289	2335	9/6	01°18'S	151°19'W	77.8	090	12	79.4	77.8	1010	02	8	1	7	2	35.14
290	0415	9/6	01°56'S	151°00'W	78.1	110	14	79.0	74.2	1010	01	1, 3, 8	2	7	3	-
291	0520	9/6	01°58'S	151°00'W	78.0	110	13	78.8	75.0	1011	02	1, 3, 8	2	7	3	35.30
292	1100	9/7	02°40'S	150°59'W	77.9	090	17	78.7	73.8	1012	02	8	2	7	2	35.32
293	1400	9/7	03°10'S	150°59'W	77.9	080	16	78.7	73.8	1012	02	8	1	7	2	35.43
294	1700	9/7	03°39'S	151°00'W	78.2	100	21	79.3	74.2	1012	02	8	1	7	2	35.52
295	1905	9/7	04°01'S	151°01'W	78.8	080	18	80.3	74.6	1014	03	8	3	7	2	-
296	1955	9/7	04°04'S	151°01'W	78.8	070	14	79.7	74.6	1014	01	8	1	7	2	35.55
297	2330	9/7	04°35'S	151°04'W	79.0	090	18	79.5	74.0	1011	03	8	5	7	3	35.55
298	0230	9/8	05°03'S	151°07'W	78.8	080	16	80.0	74.0	1011	01	8	4	7	3	35.53
299	0455	9/8	05°26'S	151°10'W	79.0	090	15	79.8	74.0	1012	02	8	5	7	3	-
300	0605	9/8	05°29'S	151°10'W	79.1	090	18	79.7	73.9	1012	02	8	5	7	3	35.50

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
301	1100	9/8	06°07'S	151°11'W	78.9	070	17	79.0	73.0	1012	01	8	1	7	3	-
302	1400	9/8	06°39'S	151°15'W	78.7	070	16	78.8	72.9	1012	02	8	1	7	3	-
303	1650	9/8	07°03'S	151°05'W	79.5	050	18	79.6	73.0	1014	02	8, 4	3	7	2	-
304	1735	9/8	07°05'S	151°04'W	79.6	050	18	79.9	72.5	1014	03	8, 4	3	7	2	35.48
305	2130	9/8	07°33'S	151°02'W	79.7	080	21	80.1	73.0	1015	01	8, 4	1	7	3	-
306	0030	9/9	08°02'S	151°01'W	80.1	070	14	81.5	72.4	1012	02	8	1	7	3	-
307	0315	9/9	08°28'S	151°00'W	80.0	070	15	80.0	73.1	1012	03	8	5	7	3	-
308	0418	9/9	08°29'S	151°00'W	80.0	070	13	79.8	73.3	1012	01	8	2	7	2	35.75
309	0900	9/9	09°02'S	150°58'W	79.8	090	13	79.6	72.8	1014	02	8	2	7	2	-
310	1200	9/9	09°33'S	150°59'W	79.4	090	14	78.5	73.8	1012	03	6	6	7	2	-
311	1445	9/9	10°02'S	151°00'W	79.0	080	15	78.6	72.6	1012	01	8	1	7	2	-
312	1540	9/9	10°04'S	151°00'W	79.4	100	16	78.0	73.0	1013	15	8	2	7	2	35.70
313	2215	9/9	10°36'S	150°55'W	79.5	070	13	78.9	73.7	1013	03	8, 6, 5	6	7	2	-
314	0100	9/10	11°03'S	150°57'W	79.2	050	11	78.6	74.3	1011	03	1,2,5,8,9	6	7	2	-
315	0320	9/10	11°26'S	150°59'W	79.3	070	16	78.4	73.2	1012	02	5, 8, 9	2	7	1	-
316	0500	9/10	11°29'S	150°59'W	79.2	070	12	77.8	72.8	1013	02	5, 8, 9	2	7	1	35.93
317	0900	9/10	11°54'S	150°59'W	79.3	100	12	78.2	72.9	1014	02	X	2	7	1	-
318	1200	9/10	12°25'S	151°03'W	79.0	090	16	79.0	76.2	1012	00	X	X	X	1	-
319	1525	9/10	13°02'S	151°08'W	79.2	050	08	76.6	73.5	1012	62	7, 8	7	7	2	-
320	1625	9/10	13°04'S	151°08'W	79.1	050	10	76.8	73.5	1012	15	7, 8, 5	7	7	2	36.22
321	2030	9/10	13°35'S	151°03'W	79.5	010	16	80.2	75.0	1013	01	8	3	7	1	-
322	2330	9/10	14°06'S	151°02'W	79.1	010	15	78.8	74.3	1011	15	8, 5, 7	4	7	1	-
323	0135	9/11	14°28'S	151°04'W	79.3	000	14	79.2	75.2	1010	01	9, 8, 6	3	7	1	-
324	0245	9/11	14°30'S	151°04'W	79.2	000	17	80.0	74.3	1010	03	9, 8, 6	5	7	1	36.29
325	0600	9/11	14°59'S	150°50'W	79.2	010	12	80.0	75.0	1010	00	X	X	X	1	-
326	1000	9/11	15°14'S	150°37'W	79.2	000	16	79.4	74.3	1010	00	X	X	7	1	-
327	1305	9/11	15°48'S	150°20'W	79.0	060	14	79.0	75.0	1008	60	7, 8	8	6	2	-
328	1600	9/11	16°22'S	150°04'W	78.4	290	19	76.0	73.0	1010	61	7	8	5	2	-
329	1930	9/11	16°50'S	149°51'W	78.6	300	18	78.6	74.2	1011	61	7	9	6	3	-
330	2230	9/11	17°14'S	149°41'W	78.2	230	22	77.5	74.5	1009	62	8	8	6	2	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
331	0300	9/19	17°25'S	149°54'W	79.8	190	09	77.7	73.4	1012	15	9, 8, 6, 4	5	7	1	-
332	0600	9/19	17°02'S	150°18'W	79.2	160	09	77.2	73.1	1015	02	4, 8	6	7	1	-
333	1000	9/19	16°48'S	150°37'W	78.7	110	11	78.8	73.7	1014	02	8, 4	6	7	2	-
334	1300	9/19	16°28'S	151°00'W	78.6	160	03	76.5	72.5	1012	15	8, 9, 6	7	7	1	-
335	1600	9/19	16°08'S	151°23'W	78.4	050	07	76.0	79.5	1013	15	8	8	7	1	-
336	2000	9/19	15°48'S	151°47'W	79.3	050	07	80.1	75.9	1016	15	4, 7, 8	8	7	2	-
337	2300	9/19	15°28'S	152°09'W	79.2	050	05	81.3	78.0	1013	01	4, 8	6	7	1	-
338	0200	9/20	15°07'S	152°30'W	79.2	050	07	80.3	73.4	1012	01	8, 4	4	7	1	-
339	0500	9/20	14°46'S	152°52'W	79.8	090	10	81.0	73.7	1013	15	8, 9	2	7	1	-
340	0800	9/20	14°32'S	152°56'W	79.4	080	05	81.0	73.1	1015	01	8	1	7	2	-
341	0905	9/20	14°32'S	152°57'W	79.4	080	05	79.9	73.0	1014	03	8, 4	3	7	2	36.26
342	1200	9/20	14°32'S	153°25'W	79.6	070	12	80.1	74.8	1012	03	8, 4	6	7	1	-
343	1510	9/20	14°31'S	153°53'W	79.4	180	08	80.0	73.8	1012	01	8	1	7	1	-
344	1800	9/20	14°30'S	154°23'W	79.7	080	10	79.8	72.9	1015	02	8, 6	1	7	1	-
345	2200	9/20	14°29'S	154°52'W	79.8	060	12	83.2	74.8	1013	03	8, 6	2	7	1	-
346	0015	9/21	14°29'S	155°16'W	80.8	070	09	82.5	75.2	1012	02	8, 9	2	7	1	-
347	0120	9/21	14°29'S	155°18'W	80.2	060	09	80.2	74.8	1012	02	8, 9	2	7	1	36.29
348	0430	9/21	14°30'S	155°51'W	79.8	100	09	81.0	75.0	1012	02	8	2	7	1	-
349	0830	9/21	14°30'S	156°17'W	80.0	080	10	81.0	74.4	1014	03	8	5	7	2	-
350	1130	9/21	14°30'S	156°47'W	79.6	100	08	80.5	76.0	1012	00	X	X	X	2	-
351	1605	9/21	14°30'S	157°32'W	79.8	100	08	78.1	74.8	1012	15	4, 5, 8	7	7	2	-
352	1715	9/21	14°30'S	157°34'W	79.8	120	10	79.1	75.0	1013	15	4, 5, 1, 8, 9	7	7	2	36.26
353	2100	9/21	14°31'S	158°01'W	79.8	140	08	79.7	73.9	1014	15	4, 5, 8, 9	7	7	2	-
354	0000	9/22	14°31'S	158°31'W	80.3	020	10	79.8	73.8	1012	15	6, 8, 9	6	7	1	-
355	0300	9/22	14°30'S	159°03'W	80.1	150	14	77.9	74.8	1012	15	6, 8, 9	6	7	1	-
356	0600	9/22	14°30'S	159°34'W	79.8	140	13	79.2	74.8	1012	01	9, 8	2	7	1	-
357	0945	9/22	14°32'S	159°57'W	79.9	130	15	78.4	75.3	1013	03	8	3	7	1	-
358	1115	9/22	14°32'S	159°59'W	79.9	130	18	78.0	75.0	1013	01	8	2	7	1	36.17
359	1415	9/22	14°03'S	159°58'W	78.8	100	03	79.5	75.0	1011	02	8	2	7	1	-
360	1715	9/22	13°33'S	159°57'W	79.8	100	07	79.0	74.2	1012	03	4, 8, 9	3	7	1	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
361	2115	9/22	13°04'S	159°57'W	79.8	100	08	83.7	77.9	1012	03	4, 8	6	7	2	-
362	2220	9/22	13°02'S	159°57'W	80.5	080	09	81.2	75.0	1012	01	4, 5, 8	5	7	2	36.18
363	0130	9/23	12°34'S	160°04'W	81.2	070	07	80.7	75.2	1010	15	4, 9, 8	6	7	2	-
364	0430	9/23	12°06'S	160°10'W	80.8	110	11	81.7	75.3	1010	15	6, 8, 9	2	7	1	-
365	0900	9/23	11°37'S	160°08'W	80.8	120	13	80.6	74.8	1011	01	8	1	7	1	-
366	1005	9/23	11°34'S	160°07'W	80.8	110	13	80.3	75.8	1012	01	8	1	7	1	36.17
367	1315	9/23	11°04'S	160°03'W	80.3	110	08	80.0	76.2	1010	00	X	X	X	1	-
368	1615	9/23	10°36'S	159°59'W	80.2	110	10	80.2	75.3	1010	15	6, 8, 9	3	7	1	-
369	2030	9/23	10°03'S	159°54'W	81.2	100	16	82.3	75.3	1012	01	1, 8, 9	2	7	1	-
370	2140	9/23	10°01'S	159.54'W	81.6	120	15	82.0	76.7	1011	02	6,1, 9,8	2	7	1	35.95
371	0215	9/24	09°32'S	159°56'W	81.8	070	15	83.5	76.5	1008	15	1, 6, 8	4	7	1	-
372	0515	9/24	09°04'S	159°55'W	81.0	050	15	81.0	77.0	1009	00	X	X	X	2	-
373	0850	9/24	08°44'S	159°53'W	81.0	050	12	80.8	76.7	1011	01	1, 8	1	7	2	-
374	0936	9/24	08°42'S	159°53'W	81.3	070	12	81.0	74.5	1010	03	1, 8	2	7	2	35.68
375	1300	9/24	08°15'S	159°50'W	80.9	060	14	80.4	74.8	1009	01	8	1	7	2	-
376	1600	9/24	07°48'S	159°48'W	80.2	060	13	80.0	74.3	1010	03	8, 4, 1	2	7	2	-
377	2140	9/24	07°04'S	159°58'W	80.9	060	13	81.3	75.4	1012	03	8, 1, 2	6	7	1	-
378	2245	9/24	07°02'S	159°59'W	81.2	050	10	81.0	75.8	1010	03	8, 1, 2	7	7	1	35.35
379	0200	9/25	06°34'S	160°02'W	81.0	050	12	83.0	76.0	1009	03	1, 2, 8	7	7	1	-
380	0500	9/25	06°06'S	160°04'W	80.6	050	08	81.8	77.3	1010	02	1, 5, 8	7	7	1	-
381	0800	9/25	05°52'S	160°01'W	80.3	050	08	81.5	76.0	1011	00	X	X	7	1	-
382	0950	9/25	05°34'S	159°58'W	80.1	050	14	81.3	76.0	1011	00	X	X	7	1	-
383	1035	9/25	05°32'S	159°58'W	80.1	070	16	80.0	75.0	1010	00	X	X	7	1	35.62
384	1400	9/25	05°03'S	159°58'W	79.9	070	14	79.7	74.2	1009	00	8, 1, 4	6	7	1	-
385	1700	9/25	04°36'S	159°57'W	79.8	090	15	79.5	74.8	1010	15	8, 1, 2	5	7	1	35.61
386	2120	9/25	04°04'S	159°59'W	79.8	080	15	80.9	74.4	1011	01	8, 2	1	7	2	-
387	2240	9/25	04°01'S	159°59'W	80.1	090	14	80.3	75.3	1010	02	8, 2	1	7	2	35.52
388	0145	9/26	03°33'S	159°55'W	79.7	090	16	81.0	76.1	1008	03	8	3	7	2	35.59
389	0445	9/26	03°05'S	159°51'W	79.9	090	14	81.2	74.8	1009	03	8	5	7	2	35.50
390	0915	9/26	02°36'S	159°53'W	79.3	090	14	81.0	74.0	1010	00	X	X	X	2	35.48

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
391	1205	9/26	02°08'S	159°57'W	79.0	120	18	79.9	73.9	1009	00	X	X	7	2	-
392	1310	9/26	02°08'S	159°57'W	79.0	120	18	80.0	75.5	1009	00	X	X	7	2	35.41
393	1645	9/26	01°33'S	160°01'W	78.8	120	16	80.2	75.2	1010	00	8	1	7	2	35.48
394	1945	9/26	01°04'S	159°59'W	78.4	110	19	80.3	75.0	1010	02	8, 3, 2	1	7	2	35.28
395	2245	9/26	00°36'S	159°58'W	78.8	120	14	80.6	75.2	1008	03	8, 4	3	7	2	35.21
396	0220	9/27	00°03'S	159°52'W	79.8	100	16	80.8	74.8	1008	01	8, 2	2	7	2	-
397	0325	9/27	00°01'S	159°54'W	79.8	100	14	80.7	76.0	1008	02	8, 2	2	7	3	35.05
398	0525	9/27	00°01'S	159°54'W	79.6	100	14	80.2	74.4	1009	03	8, 2	3	7	2	-
399	1100	9/27	00°23'N	159°36'W	78.8	100	15	79.9	74.4	1010	02	8, 2	2	7	2	35.12
400	1400	9/27	00°43'N	159°24'W	79.7	120	12	79.5	73.5	1008	02	8, 2	2	7	2	35.08
401	1700	9/27	00°59'N	159°11'W	79.4	120	08	79.0	75.1	1009	02	8, 2, 4	3	7	2	35.01
402	2000	9/27	01°10'N	158°48'W	80.0	120	14	81.1	74.6	1010	03	2, 8	5	7	2	34.96
403	2300	9/27	01°20'N	158°27'W	79.7	110	13	80.8	74.8	1009	01	2, 8, 3	2	7	2	34.92
404	0200	9/28	01°26'N	158°04'W	80.2	080	13	81.9	75.3	1007	01	8, 2	1	7	1	34.96
405	0500	9/28	01°33'N	157°40'W	79.8	080	17	81.9	75.3	1009	00	X	X	X	2	34.99
406	2345	9/28	01°57'N	157°30'W	79.8	110	16	82.0	74.8	1009	02	8, 2	5	7	1	34.99
407	0300	9/29	01°58'N	158°09'W	80.3	130	15	81.1	75.0	1008	02	2, 8	5	7	2	34.99
408	0630	9/29	01°58'N	158°52'W	80.5	120	12	80.5	73.8	1010	01	X	2	7	1	34.99
409	0930	9/29	01°59'N	159°30'W	80.6	120	12	80.3	75.2	1011	02	X	1	7	1	34.99
410	1155	9/29	02°00'N	159°59'W	80.2	120	12	80.2	75.4	1010	03	X	3	7	1	-
411	1315	9/29	02°00'N	160°01'W	80.5	100	15	80.2	74.8	1009	01	X	1	7	1	34.90
412	1620	9/29	02°29'N	160°03'W	80.2	110	07	79.9	75.0	1010	03	8, 4	2	7	1	34.90
413	1915	9/29	03°01'N	160°05'W	80.2	110	14	81.4	75.1	1012	03	3, 8	6	7	2	34.88
414	2315	9/29	03°30'N	160°04'W	80.2	110	11	82.1	75.0	1010	03	8, 4	4	7	2	34.85
415	0215	9/30	03°57'N	160°08'W	80.9	090	12	81.9	75.9	1008	02	2, 8	6	7	2	-
416	0330	9/30	03°57'N	160°08'W	80.9	090	10	81.8	76.4	1009	XX	2, 8	6	7	2	34.83
417	0705	9/30	04°24'N	160°08'W	80.6	090	12	81.6	74.0	1011	XX	X	X	7	1	34.81
418	1100	9/30	04°53'N	160°03'W	80.3	090	11	81.6	75.8	1011	XX	X	X	7	1	34.88
419	1400	9/30	05°22'N	160°01'W	81.3	090	14	81.7	75.8	1010	00	8, 6	3	7	1	-
420	1730	9/30	05°55'N	159°57'W	82.2	070	15	82.6	74.5	1012	02	8, 1	3	7	1	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., ‰
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
421	1835	9/30	05°57'N	159°56'W	82.3	060	16	83.2	74.3	1013	15	8, 1	2	7	1	34.70
422	2130	9/30	06°22'N	159°53'W	82.5	070	18	83.7	76.5	1013	03	1, 8	5	7	2	-
423	0030	10/1	06°49'N	159°55'W	82.7	070	18	83.7	76.0	1010	02	1, 8	3	7	2	-
424	0330	10/1	07°15'N	159°59'W	82.8	070	16	84.0	75.7	1010	02	1, 8	3	7	2	-
425	0910	10/1	07°56'N	159°54'W	82.4	070	18	82.5	75.4	1012	00	X	X	7	2	-
426	1035	10/1	07°58'N	159°54'W	82.4	070	18	82.5	75.9	1011	00	X	X	7	2	34.13
427	1330	10/1	08°25'N	159°49'W	81.8	060	15	81.8	74.8	1009	02	8	1	7	1	-
428	1630	10/1	08°53'N	159°44'W	81.9	060	13	81.7	75.5	1010	15	8	2	7	1	-
429	1930	10/1	09°21'N	159°52'W	81.4	060	17	81.3	75.0	1012	15	6, 9, 8	4	7	1	-
430	2325	10/1	09°53'N	160°00'W	81.4	050	19	81.5	75.7	1010	01	8	2	7	2	-
431	0015	10/2	09°59'N	160°00'W	81.3	040	18	81.5	77.0	1010	02	8	3	7	2	34.00
432	0545	10/2	10°26'N	160°02'W	80.9	050	18	81.3	75.7	1010	15	8, 9	3	7	2	-
433	1000	10/2	10°52'N	160°02'W	80.2	090	19	80.7	75.8	1012	15	8, 9	4	7	2	-
434	1300	10/2	11°20'N	160°04'W	79.8	050	18	79.7	74.8	1010	01	6	2	7	2	-
435	1625	10/2	11°53'N	160°06'W	79.8	050	18	79.8	74.7	1011	00	8	5	7	2	-
436	1735	10/2	11°54'N	160°06'W	79.8	050	17	80.3	74.7	1012	02	8, 6	5	7	2	34.56
437	2030	10/2	12°15'N	160°04'W	80.0	070	17	81.0	74.8	1012	01	8, 6	1	7	3	-
438	2330	10/2	12°39'N	160°00'W	80.0	060	15	81.7	74.6	1010	03	1, 8	6	7	3	-
439	0230	10/3	13°03'N	159°53'W	80.0	060	16	81.0	75.0	1009	02	1, 8	6	7	3	-
440	0530	10/3	13°30'N	159°47'W	79.2	060	18	80.1	73.1	1012	01	X	2	7	3	-
441	0810	10/3	13°55'N	159°42'W	79.2	060	17	79.6	74.0	1013	02	X	2	7	3	-
442	0855	10/3	13°56'N	159°41'W	79.2	060	18	79.5	74.2	1014	02	X	2	7	3	34.60
443	1230	10/3	14°25'N	159°35'W	78.9	060	16	79.7	73.8	1012	02	X	2	7	3	-
444	1530	10/3	14°51'N	159°28'W	79.0	060	16	79.0	73.8	1012	02	8	2	7	2	-
445	1830	10/3	15°18'N	159°20'W	78.5	060	19	77.8	73.2	1014	03	8	3	7	2	-
446	2115	10/3	15°41'N	159°12'W	79.2	070	18	80.0	72.8	1014	03	8, 1, 2	4	7	2	-
447	2200	10/3	15°43'N	159°11'W	79.3	050	16	79.6	73.7	1014	15	8, 9	2	7	2	34.83
448	0130	10/4	16°10'N	159°06'W	79.3	070	17	80.6	73.9	1011	03	1, 8	8	7	2	-
449	0430	10/4	16°36'N	159°00'W	79.3	070	16	80.5	75.0	1012	02	8, 1, 6	8	7	2	-
450	0730	10/4	17°02'N	158°55'W	79.3	070	16	79.2	73.4	1015	01	X	X	7	2	-

Table 1.--Summary of observations at BT lowerings, Hugh M. Smith cruise 35 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover			
451	1005	10/4	17°25'N	158°51'W	79.3	070	14	79.2	73.0	1015	00	X	X	7	2	-
452	1035	10/4	17°28'N	158°50'W	79.1	080	14	79.3	73.2	1015	00	X	X	7	2	34.72
453	1430	10/4	17°56'N	158°44'W	79.3	080	10	79.0	73.8	1014	25	6, 8	5	7	2	-
454	1730	10/4	18°24'N	158°45'W	79.3	090	12	78.9	73.6	1016	03	8, 1, 3	6	7	2	-
455	2030	10/4	18°52'N	158°29'W	79.9	120	11	81.3	75.6	1016	01	8, 2, 1	4	7	2	-
456	0005	10/5	19°26'N	158°19'W	80.3	180	04	79.8	72.0	1014	15	8, 2, 1	6	7	2	-
457	0045	10/5	19°29'N	158°19'W	80.3	180	02	80.6	73.5	1013	15	9, 8, 2	6	7	1	34.72
458	0430	10/5	20°01'N	158°11'W	80.7	180	04	80.0	74.0	1013	02	1, 4, 8	8	7	1	-
459	0730	10/5	20°29'N	158°04'W	79.6	230	05	77.3	73.2	1015	64	X	9	7	1	-
460	0930	10/5	20°57'N	157°57'W	79.4	180	02	78.3	72.3	1015	01	8	4	7	1	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30, recorded on U.S.N.H.O. Log Sheet B; for coded values see H.O. Pub. 606-C (Rev. 2.56)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
1	0700	8/8	18°55'N	155°43'W	77.8	078	14	79.0	74.5	1014	02	X	X	X	3	34.76	-
2	1000	8/8	18°43'N	155°22'W	78.4	075	13	77.4	74.3	1015	X	X	X	X	3	-	-
3	1300	8/8	18°28'N	154°59'W	78.6	087	15	76.8	74.3	1014	X	X	X	X	3	-	-
4	1600	8/8	18°15'N	154°36'W	77.5	070	12	76.8	73.5	1014	X	8,5	2	8	3	-	-
5	1900	8/8	18°01'N	154°13'W	77.6	088	10	76.0	73.0	1015	25	6,8,9,5	5	8	3	-	-
6	2200	8/8	17°47'N	153°50'W	78.5	075	12	79.9	74.3	1014	01	5,6,8	3	8	3	34.70	0.23
7	0100	8/9	17°34'N	153°27'W	78.7	091	13	81.7	73.8	1013	02	5,6,8	2	8	3	-	-
8	0400	8/9	17°21'N	153°03'W	78.5	083	12	78.6	71.2	1012	03	1,5,6,8	2	8	3	-	-
9	0700	8/9	17°08'N	152°39'W	78.3	077	16	78.4	71.7	1014	X	X	X	X	3	-	-
10	1000	8/9	16°56'N	152°17'W	78.1	088	17	76.8	69.5	1014	X	X	X	X	3	-	-
11	1300	8/9	16°43'N	151°54'W	78.0	063	19	78.2	73.0	1012	X	X	X	X	3	-	-
12	1600	8/9	16°30'N	151°31'W	78.1	083	19	77.5	73.2	1010	X	6,8	6	7	3	-	-
13	1900	8/9	16°17'N	151°07'W	78.1	066	23	78.4	74.6	1014	03	0,5,6,8	6	8	4	-	-
14	2200	8/9	16°04'N	150°44'W	78.1	083	22	79.5	74.0	1013	02	4,5,6,8	6	8	4	34.78	0.32
15	0100	8/10	15°50'N	150°23'W	78.0	070	17	79.7	75.6	1012	03	0,6,8	7	8	4	-	-
16	0400	8/10	15°36'N	150°02'W	77.8	095	17	77.3	75.1	1013	02	6,8	7	7	4	-	-
17	0700	8/10	15°21'N	149°41'W	77.3	097	16	78.4	75.2	1015	X	X	X	7	4	-	-
18	1000	8/10	15°06'N	149°20'W	77.4	092	17	76.5	73.6	1014	X	X	X	7	4	-	-
19	1300	8/10	14°52'N	148°59'W	77.1	085	18	77.3	74.4	1014	X	X	X	7	3	-	-
20	1600	8/10	14°37'N	148°38'W	77.2	068	17	76.8	74.0	1014	X	5,6,8	5	7	3	-	-
21	1900	8/10	14°22'N	148°17'W	77.4	062	22	78.2	74.4	1015	01	3,5,6,8	6	8	3	-	-
22	2200	8/10	14°07'N	147°57'W	77.8	055	14	79.0	74.3	1015	02	1,4,5,8	4	8	3	34.67	0.30
23	0100	8/11	13°50'N	147°39'W	78.2	039	17	80.6	75.4	1012	01	4,5,8	2	8	3	-	-
24	0400	8/11	13°31'N	147°21'W	79.2	042	16	78.1	74.0	1013	03	4,5,8	3	8	3	-	-
25	0700	8/11	13°14'N	147°04'W	79.8	053	17	78.3	75.2	1014	X	X	X	7	3	-	-
26	1000	8/11	12°57'N	146°47'W	79.5	052	15	78.6	75.3	1013	X	X	X	7	3	-	-
27	1300	8/11	12°40'N	146°30'W	80.2	084	14	77.7	75.6	1011	81	X	X	X	3	-	-
28	1600	8/11	12°23'N	146°13'W	80.3	068	15	79.5	76.3	1012	X	5,6,8	5	8	3	-	-
29	1900	8/11	12°05'N	145°56'W	80.6	090	16	81.2	77.0	1013	02	0,5,6,8,9	5	8	3	-	-
30	2200	8/11	11°48'N	145°39'W	81.0	071	18	81.5	76.2	1012	01	5,6,8	3	8	3	33.80	0.35

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
31	0100	8/12	11°30'N	145°23'W	81.3	075	18	81.8	76.4	1011	03	4,5,6,8	6	8	3	-	-
32	0400	8/12	11°11'N	145°07'W	81.0	083	17	80.6	75.5	1012	02	1,6,8	5	8	3	-	-
33	0700	8/12	10°54'N	144°48'W	81.2	067	17	80.8	76.0	1013	02	X	X	8	3	-	-
34	1000	8/12	10°36'N	144°28'W	81.0	065	14	80.2	75.5	1012	02	X	X	8	3	-	-
35	1300	8/12	10°18'N	144°07'W	81.2	079	14	80.8	76.0	1010	81	X	X	X	3	-	-
36	1600	8/12	10°00'N	143°47'W	81.1	000	00	78.6	74.0	1012	X	1,3,5,8	6	8	1	-	-
37	1900	8/12	09°42'N	143°26'W	81.2	071	04	81.0	75.4	1013	02	5,8	6	8	1	-	-
38	2200	8/12	09°25'N	143°06'W	82.6	073	07	82.6	76.4	1012	25	5,6,8	7	8	1	33.96	0.33
39	0000	8/13	09°07'N	142°42'W	81.9	225	08	81.0	75.4	1010	02	1,5,8	7	8	2	-	-
40	0300	8/13	08°50'N	142°19'W	81.6	230	09	79.7	75.3	1010	03	4,6,8,9	7	8	2	-	-
41	0600	8/13	08°32'N	141°56'W	81.2	217	10	79.9	74.6	1012	02	X	X	8	2	-	-
42	0900	8/13	08°15'N	141°32'W	81.2	260	09	80.6	76.4	1012	02	X	X	8	2	-	-
43	1200	8/13	07°57'N	141°09'W	80.8	220	10	79.0	75.3	1010	X	X	X	8	2	-	-
44	1500	8/13	07°40'N	140°45'W	81.0	178	13	79.7	75.0	1011	02	6,8,4,5	4	8	2	-	-
45	1800	8/13	07°21'N	140°22'W	80.9	200	09	81.3	74.7	1012	02	1,5,8	6	8	2	-	-
46	2100	8/13	07°04'N	139°59'W	82.3	190	11	82.4	75.6	1012	02	1,6,8	4	8	2	33.93	0.34
47	0000	8/14	06°47'N	139°39'W	81.9	172	08	83.0	75.6	1010	02	4,5,8	5	8	2	-	-
48	0300	8/14	06°28'N	139°19'W	81.6	132	09	79.6	74.4	1011	02	4,5,8	7	8	2	-	-
49	0600	8/14	06°10'N	138°59'W	80.6	112	09	79.5	74.6	1013	02	X	X	8	2	-	-
50	0900	8/14	05°52'N	138°39'W	81.0	132	13	79.6	73.8	1012	02	X	X	8	2	-	-
51	1200	8/14	05°34'N	138°19'W	80.7	150	16	79.1	73.7	1010	02	X	X	8	3	-	-
52	1500	8/14	05°16'N	137°59'W	80.5	132	16	78.7	74.5	1011	02	4,6,8	3	8	3	-	-
53	1800	8/14	04°58'N	137°39'W	80.7	132	15	80.0	74.6	1013	03	4,6	6	8	3	-	-
54	2100	8/14	04°39'N	137°19'W	80.8	132	16	82.4	75.0	1012	02	1,4,8	3	8	3	34.83	0.54
55	0000	8/15	04°24'N	137°02'W	80.8	145	16	80.4	74.2	1010	02	5,8	3	8	3	-	-
56	0300	8/15	04°09'N	136°45'W	80.6	132	13	79.8	75.3	1012	25	4,6,8	7	8	3	-	-
57	0600	8/15	03°54'N	136°27'W	80.5	121	19	79.1	73.5	1013	02	X	X	8	3	-	-
58	0900	8/15	03°39'N	136°10'W	79.5	132	15	78.2	73.3	1013	02	8	2	8	3	-	-
59	1200	8/15	03°23'N	135°53'W	79.8	130	14	77.5	72.4	1012	02	X	X	8	3	34.87	0.44
60	1500	8/15	03°08'N	135°36'W	78.8	157	16	77.5	73.0	1012	02	8	3	8	3	-	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
61	1800	8/15	02°55'N	135°17'W	76.8	158	16	77.3	72.8	1014	02	6,8	7	7	3	34.94	0.60
62	2100	8/15	02°43'N	134°58'W	77.3	160	12	78.5	74.2	1013	03	4,6,8,9	3	8	3	-	-
63	0000	8/16	02°29'N	134°45'W	77.4	132	13	80.1	74.2	1011	02	5,8	2	8	3	35.03	0.56
64	0300	8/16	02°16'N	134°33'W	77.3	140	15	77.9	72.7	1012	02	6,8	2	8	3	-	-
65	0600	8/16	02°03'N	134°19'W	77.3	132	15	78.0	72.8	1013	02	X	X	8	3	34.99	0.52
66	0900	8/16	01°49'N	134°06'W	77.4	115	14	77.6	71.6	1013	02	8	1	8	3	-	-
67	1200	8/16	01°36'N	133°53'W	77.8	125	12	77.5	72.8	1012	X	X	X	8	3	34.90	0.40
68	1615	8/16	01°25'N	133°49'W	78.9	130	16	77.1	72.9	1013	02	1,4,8	3	8	3	-	-
69	2045	8/16	01°32'N	134°04'W	78.1	128	16	79.3	72.8	1012	02	6,8	2	8	3	34.83	0.50
70	0150	8/17	01°24'N	133°57'W	78.3	120	09	79.6	72.3	1011	02	8	2	8	3	-	-
71	0900	8/17	00°52'N	133°27'W	78.2	122	19	77.0	71.2	1012	02	6,8	2	8	3	34.83	0.45
72	1615	8/17	00°25'N	133°07'W	78.1	157	18	77.3	71.2	1013	02	1,8	3	8	3	-	-
73	2030	8/17	00°20'N	133°25'W	78.8	150	17	78.8	71.6	1014	02	4,8	2	8	4	34.83	-
74	0120	8/18	00°15'N	133°18'W	78.5	120	16	77.5	72.0	1011	02	5,8	3	8	4	-	-
-	0600	8/18	00°06'N	133°06'W	78.0	130	14	77.2	72.5	1014	02	X	X	8	3	34.83	0.45
75	0900	8/18	00°22'S	132°44'W	77.0	128	20	75.7	70.2	1013	02	X	X	X	3	-	-
76	1615	8/18	00°54'S	132°21'W	75.5	142	18	75.6	71.4	1015	02	1,6,8	3	8	3	-	-
77	2100	8/18	00°57'S	132°24'W	77.0	135	17	77.0	72.4	1015	02	0	0	8	3	34.94	0.63
78	0110	8/19	01°00'S	132°15'W	75.6	130	15	76.3	71.8	1015	03	4,8	6	8	3	-	-
-	0600	8/19	01°12'S	132°06'W	75.5	120	17	76.0	72.3	1014	02	X	X	X	3	34.99	0.59
79	0900	8/19	01°57'S	131°51'W	75.3	087	20	76.0	70.8	1014	02	X	X	8	3	-	-
80	1615	8/19	02°44'S	131°42'W	75.9	270	11	77.0	72.8	1015	03	4,8,9	3	8	3	-	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
81	2040	8/19	02°42'S	131°42'W	76.4	265	12	80.0	73.6	1015	03	8,9	3	8	3	35.10	-
82	0150	8/20	02°40'S	131°33'W	75.4	134	13	76.0	71.8	1013	03	5,6,9	6	8	3	-	-
-	0600	8/20	03°12'S	131°42'W	75.8	120	16	76.3	72.0	1015	02	X	X	8	3	35.12	0.62
83	0900	8/20	03°34'S	131°32'W	76.7	108	16	77.5	73.3	1015	02	X	X	8	3	-	-
84	1610	8/20	04°27'S	131°38'W	76.6	124	13	77.0	72.1	1015	02	5,8	1	8	3	-	-
85	2045	8/20	04°20'S	131°50'W	77.1	132	12	77.0	72.7	1015	02	8	2	8	3	35.08	0.81
86	0135	8/21	04°21'S	131°41'W	77.0	128	16	77.6	71.8	1013	02	8	2	8	3	-	-
-	0600	8/21	04°48'S	131°48'W	76.8	116	15	77.4	72.3	1015	02	X	X	8	3	35.50	0.83
87	0900	8/21	05°13'S	131°53'W	77.0	105	16	76.9	72.0	1015	02	X	X	8	3	-	-
88	1610	8/21	06°03'S	132°16'W	77.7	095	16	77.6	71.6	1015	02	8	2	8	3	-	-
89	2045	8/21	05°56'S	132°22'W	77.9	142	14	79.0	72.8	1015	02	8	3	8	3	35.44	0.64
90	0135	8/22	05°54'S	132°13'W	78.0	120	12	79.1	72.5	1012	02	8	3	8	3	-	-
-	0600	8/22	06°12'S	132°06'W	77.6	114	15	77.5	72.3	1011	02	X	X	8	3	35.43	0.62
91	0900	8/22	06°44'S	132°05'W	77.3	130	17	78.6	72.7	1014	02	X	X	X	3	-	-
92	1605	8/22	07°34'S	132°04'W	77.5	114	14	77.4	71.6	1015	02	8	2	8	3	-	-
93	2045	8/22	07°26'S	132°14'W	77.5	118	16	82.5	74.3	1014	02	8	3	8	4	35.43	0.63
94	0055	8/23	07°24'S	132°05'W	77.8	115	16	77.5	71.6	1012	02	5,8	3	8	3	-	-
-	0600	8/23	08°00'S	132°06'W	77.4	113	15	77.0	71.5	1014	02	X	X	8	3	35.41	0.64
95	0900	8/23	08°28'S	132°01'W	77.5	093	16	76.8	72.0	1014	02	X	X	8	3	-	-
96	1605	8/23	09°22'S	132°09'W	77.3	070	18	74.5	70.6	1015	50	0,6,8	7	8	4	-	-
97	2095	8/23	09°20'S	132°16'W	78.0	112	12	80.0	70.5	1015	01	4,5,8	4	8	3	35.41	0.85
98	0115	8/24	09°19'S	132°08'W	78.0	124	13	77.8	71.0	1012	02	1,8	1	8	3	-	-
-	0600	8/24	09°54'S	132°12'W	77.3	106	15	76.5	68.7	1015	02	X	X	8	3	35.41	0.62
99	0900	8/24	10°08'S	131°59'W	77.3	106	14	78.3	71.7	1015	02	X	X	X	3	-	-
100	1605	8/24	10°52'S	132°00'W	76.8	094	13	76.3	70.5	1015	02	4,6,8	2	8	2	-	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
101	2045	8/24	10°46'S	132°04'W	77.2	100	13	78.4	72.7	1015	02	6,8,9	2	8	2	35.55	0.88
102	0110	8/25	10°44'S	131°55'W	77.3	100	13	79.6	72.4	1013	02	8	2	8	2	-	-
-	0600	8/25	11°06'S	132°00'W	76.5	112	15	76.0	70.3	1015	02	X	X	8	2	35.71	0.74
103	0900	8/25	11°30'S	131°55'W	76.4	094	16	75.9	71.0	1014	02	X	X	8	2	-	-
104	1615	8/25	12°14'S	132°04'W	76.3	080	16	76.3	71.0	1015	02	6,8	2	8	2	-	-
105	2040	8/25	12°07'S	132°11'W	76.7	110	15	78.5	71.4	1015	03	5,6	4	8	2	35.79	0.47
106	0035	8/26	12°06'S	132°04'W	76.9	082	13	76.5	70.9	1013	02	5,6,8	6	8	2	-	-
107	0900	8/26	12°51'S	132°03'W	76.5	099	12	77.6	71.6	1015	02	X	X	8	2	-	-
108	1620	8/26	13°31'S	132°16'W	75.8	098	14	74.5	69.7	1016	02	8	3	8	2	-	-
109	2040	8/26	13°27'S	132°16'W	75.3	098	13	78.8	71.0	1016	02	4,6,8	2	8	2	36.06	0.75
110	0055	8/27	13°25'S	132°12'W	76.1	105	12	76.0	70.1	1015	02	4,5	2	8	2	-	-
111	0900	8/27	12°48'S	132°41'W	76.4	078	18	75.4	71.0	1016	02	X	X	8	2	-	-
112	1615	8/27	12°18'S	133°18'W	77.0	097	17	76.5	71.4	1016	02	2	8	8	2	-	-
113	2100	8/27	12°16'S	133°20'W	77.0	114	17	77.0	71.1	1016	02	8	2	8	3	35.84	0.63
114	0100	8/28	12°16'S	133°11'W	77.0	095	20	76.4	69.7	1014	02	4,8	2	8	3	-	-
115	0900	8/28	11°53'S	134°09'W	77.1	139	22	76.6	69.5	1015	02	X	X	8	3	-	-
116	1610	8/28	11°34'S	134°33'W	76.9	096	16	75.6	69.8	1016	02	4,5,8	3	8	3	-	-
117	2045	8/28	11°23'S	134°33'W	77.3	115	16	78.8	71.7	1016	02	4,8	2	8	3	35.81	0.74
118	0100	8/29	11°24'S	134°28'W	77.3	083	15	77.1	72.0	1014	02	8	2	8	3	-	-
119	0900	8/29	10°58'S	134°57'W	77.6	096	19	77.0	71.2	1015	02	X	X	8	3	-	-
120	1615	8/29	10°36'S	135°38'W	77.4	090	16	77.4	71.7	1016	02	4,8	2	8	3	-	-
121	2035	8/29	10°31'S	135°46'W	77.2	118	16	80.0	71.3	1017	02	8	2	8	3	35.66	0.68
122	0135	8/30	10°32'S	135°37'W	77.6	103	16	77.0	70.9	1014	02	5,8	5	8	3	-	-
123	0900	8/30	10°06'S	136°03'W	77.5	112	21	77.0	70.3	1015	02	X	X	X	3	-	-
124	1620	8/30	09°38'S	136°43'W	77.6	110	17	76.6	72.5	1014	25	0,8	8	8	3	-	-
125	2040	8/30	09°37'S	136°55'W	78.0	137	17	81.6	75.0	1014	01	8	3	8	4	35.48	0.71
126	0140	8/31	09°34'S	136°45'W	78.2	084	16	78.0	72.6	1011	03	4,8	5	8	4	-	-
127	1625	8/31	08°44'S	137°50'W	78.0	098	19	77.8	73.0	1012	01	9	5	8	4	-	-
128	2040	8/31	08°41'S	137°59'W	78.2	108	18	80.0	71.9	1012	02	5,8	1	8	4	35.41	0.62
129	0130	9/1	08°42'S	137°51'W	78.0	078	18	79.3	71.5	1010	02	6,8	1	8	4	-	-
130	0900	9/1	08°14'S	138°19'W	78.1	073	16	77.5	70.8	1012	02	X	X	8	4	-	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
131	1610	9/1	07°32'S	138°54'W	78.0	072	09	78.6	71.3	1012	02	5,8	2	8	2	-	-
132	2050	9/1	07°31'S	138°57'W	78.3	073	10	76.9	72.4	1012	03	0,8	8	8	2	35.64	0.75
133	0140	9/2	07°31'S	138°48'W	78.8	153	11	78.3	74.4	1010	03	0,6,8	8	8	2	-	-
134	0900	9/2	08°01'S	138°56'W	78.4	119	20	78.7	73.2	1011	02	X	X	X	3	-	-
135	1620	9/2	08°49'S	139°08'W	78.2	099	18	79.3	72.4	1011	01	6,8	6	9	3	-	-
136	2045	9/2	08°48'S	139°10'W	78.2	087	19	78.0	73.1	1012	25	6,8	6	8	3	35.48	0.62
137	0120	9/3	08°48'S	139°03'W	78.2	096	21	79.0	70.3	1008	02	8	2	9	4	-	-
138	0900	9/3	09°38'S	139°16'W	78.1	099	19	77.9	71.4	1010	02	X	X	9	4	-	-
139	1620	9/3	10°28'S	139°38'W	78.3	080	20	78.8	71.6	1012	02	6,8	6	9	3	-	-
140	2045	9/3	10°25'S	139°40'W	78.5	085	18	78.0	73.3	1014	03	0,6,8	6	9	3	35.64	0.63
141	0150	9/4	10°24'S	139°31'W	78.3	095	18	78.6	72.5	1011	01	4,6,8,9	5	9	3	-	-
142	0900	9/4	09°36'S	139°46'W	78.1	079	17	79.8	73.0	1012	02	X	X	X	3	-	-
143	1620	9/4	09°06'S	140°06'W	78.2	089	17	79.7	73.6	1012	02	4,8	5	9	3	-	-
144	2045	9/4	09°08'S	140°10'W	78.5	108	17	80.1	73.5	1013	02	4,8	3	8	3	35.52	0.92
145	0050	9/5	09°06'S	140°02'W	78.5	096	17	76.9	73.0	1010	02	8	2	8	3	-	-
146	1533	9/7	09°01'S	140°05'W	78.2	137	08	78.9	72.8	1013	02	8	3	8	2	-	-
147	1545	9/7	09°02'S	140°05'W	78.2	165	16	78.6	72.8	1014	02	8	3	8	2	-	-
148	1557	9/7	09°03'S	140°05'W	78.1	165	16	78.7	72.5	1014	02	8	3	8	2	-	-
149	1610	9/7	09°04'S	140°05'W	78.1	172	16	78.8	72.6	1015	01	8	2	8	2	-	-
150	1623	9/7	09°05'S	140°05'W	78.1	172	16	78.6	72.0	1015	01	8	2	9	2	-	-
151	2100	9/7	08°34'S	140°23'W	78.6	078	17	79.1	73.9	1015	02	8	2	9	3	35.55	0.74
152	0020	9/8	08°11'S	140°33'W	78.8	062	14	79.8	73.7	1012	02	5,8	3	8	3	-	-
153	1550	9/8	07°52'S	140°36'W	78.2	075	13	78.6	73.3	1014	02	8	3	8	2	-	-
154	1845	9/8	07°48'S	140°13'W	78.4	100	12	78.6	72.4	1016	01	8	1	8	2	-	-
155	2105	9/8	07°47'S	140°02'W	78.8	115	14	80.7	73.5	1015	01	8	1	8	3	35.52	0.72
156	0000	9/9	08°05'S	139°48'W	79.0	106	14	80.8	74.9	1013	03	8	6	8	3	-	-
157	0330	9/9	08°31'S	139°48'W	78.7	121	14	79.6	74.3	1014	01	5,6,8	2	8	3	-	-
158	1745	9/10	08°49'S	139°18'W	78.2	114	13	79.0	73.4	1015	02	8	3	8	3	-	-
159	2100	9/10	09°08'S	139°05'W	78.5	097	16	80.0	73.3	1014	02	8	2	8	3	35.46	0.66
160	0120	9/11	09°36'S	138°52'W	78.8	094	15	79.1	72.6	1012	02	8	5	8	3	-	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
161	1600	9/11	09°44'S	138°47'W	78.0	090	16	77.4	71.7	1013	02	8	6	8	3	-	-
162	1800	9/11	09°52'S	138°51'W	77.9	093	16	79.0	71.3	1015	02	8	3	8	3	-	-
163	2100	9/11	10°05'S	138°39'W	78.3	090	16	80.6	72.8	1013	01	8	2	8	4	35.53	0.62
164	0005	9/12	10°24'S	138°29'W	78.3	081	17	81.7	73.0	1011	02	8	3	8	3	-	-
165	1730	9/12	10°27'S	138°43'W	77.9	315	03	81.2	69.0	1014	02	8	1	9	1	-	-
166	2010	9/12	10°17'S	138°53'W	78.3	050	07	79.4	71.3	1013	02	8	1	9	2	-	-
167	2110	9/12	10°14'S	138°57'W	78.5	062	11	79.8	71.4	1013	02	8	1	9	2	35.55	0.62
168	0000	9/13	09°59'S	139°02'W	78.8	087	08	78.5	71.7	1011	02	5,8	2	9	2	-	-
169	2120	9/13	09°45'S	139°24'W	79.5	090	02	80.0	71.3	1013	02	8	1	9	2	35.62	0.52
170	0003	9/14	09°32'S	139°50'W	79.6	090	03	83.8	73.2	1012	02	8	2	9	2	-	-
171	1921	9/14	09°18'S	140°07'W	78.5	087	17	80.0	73.8	1014	01	4,8	1	8	3	-	-
172	2105	9/14	09°08'S	140°09'W	78.7	103	17	80.1	73.2	1012	02	8	1	8	3	35.52	0.63
173	1800	9/17	08°52'S	140°20'W	78.5	093	16	80.0	71.3	1014	02	8	1	8	2	-	-
174	2107	9/17	08°43'S	140°44'W	79.1	121	12	84.9	75.4	1012	02	8	3	8	3	35.52	0.62
175	0005	9/18	08°24'S	140°58'W	78.7	055	16	78.2	71.8	1010	02	8	2	8	3	-	-
176	0308	9/18	07°59'S	141°11'W	78.4	081	17	78.0	72.1	1010	02	8	1	8	3	-	-
177	0605	9/18	07°34'S	141°25'W	78.1	073	15	77.8	71.5	1012	02	X	X	8	3	-	-
178	0855	9/18	07°09'S	141°38'W	77.8	084	16	77.5	72.0	1012	02	8	2	8	3	-	-
179	1200	9/18	06°43'S	141°52'W	77.7	107	14	77.0	71.7	1011	02	8	1	8	3	-	-
180	1500	9/18	06°18'S	142°06'W	77.5	085	14	77.1	71.9	1012	02	8	2	8	3	-	-
181	1800	9/18	05°53'S	142°19'W	78.0	102	14	79.4	72.8	1014	02	8	2	8	3	-	-
182	2102	9/18	05°28'S	142°33'W	78.3	093	12	80.0	73.4	1012	02	8	2	8	3	35.61	0.54
183	0000	9/19	05°02'S	142°49'W	78.5	106	14	79.7	72.8	1009	02	6,8	1	8	3	-	-
184	0300	9/19	04°37'S	143°05'W	78.2	096	14	78.4	73.1	1010	02	6,8	3	8	3	35.53	-
185	0600	9/19	04°11'S	143°21'W	78.0	099	14	78.4	72.8	1011	02	X	X	8	3	-	-
186	0900	9/19	03°45'S	143°37'W	77.0	083	14	77.5	72.8	1012	02	5,8	3	8	3	35.55	-
187	1200	9/19	03°20'S	143°53'W	78.0	086	15	79.2	74.3	1010	02	8	3	8	3	-	-
188	1500	9/19	02°53'S	144°11'W	77.5	072	15	77.5	74.0	1011	02	1,6,8	5	8	3	35.52	0.68
189	1800	9/19	02°27'S	144°25'W	77.9	093	14	79.0	74.2	1013	60	0,6,8	6	8	3	-	-
190	2100	9/19	02°01'S	144°40'W	78.1	071	13	80.1	74.8	1012	02	1,6,8	3	8	3	35.44	0.62

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
191	0000	9/20	01°36'S	144°53'W	78.2	091	13	80.6	75.3	1009	03	1,2,6,8	7	8	3	-	-
192	0300	9/20	01°11'S	145°07'W	77.9	078	13	76.5	73.6	1010	01	1,2,8	3	8	3	35.35	0.48
193	0600	9/20	00°46'S	145°20'W	77.5	073	13	77.5	73.4	1012	03	8	5	8	3	-	-
194	0900	9/20	00°21'S	145°34'W	77.1	061	12	77.0	73.2	1012	02	8	3	8	3	35.28	0.60
195	1200	9/20	00°04'N	145°47'W	77.1	092	14	76.8	73.5	1010	02	8	4	8	3	-	-
196	1455	9/20	00°29'N	146°00'W	77.1	095	15	77.0	72.6	1011	01	8	2	8	3	35.30	1.14
197	1800	9/20	00°54'N	146°14'W	77.9	110	16	77.8	73.1	1013	03	8	4	8	3	-	-
198	2100	9/20	01°19'N	146°27'W	78.1	097	15	79.5	74.2	1012	02	8	2	8	3	-	0.46
199	0000	9/21	01°44'N	146°40'W	78.4	123	14	78.4	74.2	1009	01	8	1	8	3	-	-
200	0300	9/21	02°09'N	146°54'W	77.9	093	12	77.6	73.8	1010	03	6,8	2	8	3	35.07	0.84
201	0600	9/21	02°37'N	147°11'W	77.3	099	12	77.8	73.1	1012	03	8	4	8	3	-	-
202	0900	9/21	03°05'N	147°29'W	77.1	102	13	77.0	73.1	1012	02	8	2	8	3	35.07	-
203	1200	9/21	03°34'N	147°49'W	77.2	122	17	77.4	72.7	1009	01	8	1	8	3	-	-
204	1500	9/21	04°08'N	148°08'W	77.5	126	17	76.8	72.0	1010	03	2,8	3	8	3	35.01	0.55
205	1800	9/21	04°28'N	148°25'W	77.9	124	13	79.5	73.2	1011	02	4,5,8	3	8	3	-	-
206	2055	9/21	04°59'N	148°41'W	80.6	135	12	81.8	75.1	1012	02	2,5,8	2	8	3	35.03	0.39
207	0000	9/22	05°20'N	148°54'W	81.1	127	13	81.7	74.3	1009	02	2,4,5,8	2	8	3	-	-
208	0300	9/22	05°46'N	149°06'W	81.7	142	12	82.6	74.8	1009	02	2,3,4,5,8	3	8	3	-	-
209	0600	9/22	06°13'N	149°18'W	82.1	156	12	81.3	74.7	1011	03	X	X	8	2	-	-
210	0855	9/22	06°39'N	149°30'W	81.8	162	12	83.0	74.9	1011	03	6	6	8	2	-	-
211	1200	9/22	07°05'N	149°41'W	81.7	168	11	81.0	73.2	1010	03	4,8	8	8	2	-	-
212	1500	9/22	07°31'N	149°52'W	82.0	179	08	81.4	73.9	1010	02	4,5,8	7	8	2	-	-
213	1800	9/22	07°57'N	150°04'W	82.1	180	09	85.0	75.3	1011	02	0,3,4,8	7	8	2	-	-
214	2200	9/22	08°30'N	150°19'W	81.7	170	07	83.7	77.0	1010	02	0,2,5,8	6	8	2	34.23	0.20
215	0100	9/23	08°53'N	150°33'W	83.4	081	07	81.1	76.5	1008	02	4,5,8	5	8	2	-	-
216	0400	9/23	09°15'N	150°48'W	83.0	074	07	80.3	75.8	1010	16	3,4,5,6,8	5	8	2	-	-
217	0700	9/23	09°39'N	151°03'W	81.2	073	07	81.3	76.4	1011	02	X	X	8	1	-	-
218	1000	9/23	10°01'N	151°17'W	81.2	068	11	81.2	76.3	1011	80	X	X	8	1	-	-
219	1310	9/23	10°24'N	151°32'W	81.0	050	09	79.6	75.3	1009	00	X	X	8	1	-	-
220	1600	9/23	10°47'N	151°47'W	81.0	051	09	79.4	75.6	1010	02	1,4,8	3	8	2	-	-

Table 2.--Summary of observations at BT lowerings, Charles H. Gilbert cruise 30 (cont'd)

Ser. No.	Time, GCT	Date, 1956	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea	Surf. sal., °/oo	Surf. PO_4-P, µg at./L.
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover				
221	1900	9/23	11°09'N	152°02'W	81.0	049	09	80.6	75.5	1012	02	1,4,6,8	2	8	2	-	-
222	2200	9/23	11°33'N	152°18'W	80.5	063	13	82.3	75.5	1011	01	1,6,8,9	3	8	2	34.23	-
223	0100	9/24	11°58'N	152°32'W	81.0	059	12	82.8	77.0	1010	01	1,5,6,8,9	2	8	3	-	-
224	0355	9/24	12°22'N	152°47'W	80.5	047	17	80.1	76.5	1011	16	2,8,9	6	8	3	-	-
225	0700	9/24	12°46'N	153°01'W	79.8	061	18	80.0	75.7	1012	01	X	X	8	3	-	-
226	1000	9/24	13°10'N	153°16'W	79.5	058	19	79.5	75.6	1012	02	X	X	2	3	-	-
227	1300	9/24	13°35'N	153°30'W	79.2	064	17	80.0	75.5	1011	01	X	X	8	3	-	-
228	1600	9/24	13°59'N	153°45'W	79.0	054	18	79.3	74.9	1012	02	1,2,4,8	5	8	3	-	-
229	1900	9/24	14°24'N	153°59'W	79.2	058	16	81.8	75.7	1014	02	8	6	8	3	-	-
230	2155	9/24	14°49'N	154°15'W	79.0	063	17	80.4	75.6	1013	02	2,8	6	8	3	34.61	-
231	0100	9/25	15°15'N	154°27'W	78.8	072	16	82.2	75.9	1012	02	1,2,5,8	6	8	3	-	-
232	0400	9/25	15°41'N	154°39'W	78.6	059	19	78.8	74.0	1012	02	2,5,8	5	8	3	-	-
233	0700	9/25	16°07'N	154°51'W	78.3	073	18	80.4	74.0	1015	01	X	X	8	4	-	-
234	1000	9/25	16°33'N	155°04'W	78.5	058	14	77.0	73.8	1015	02	X	X	8	4	-	-
235	1300	9/25	16°59'N	155°16'W	78.3	057	16	77.6	74.4	1014	02	X	X	8	3	-	-
236	1600	9/25	17°27'N	155°27'W	78.4	078	17	77.5	71.3	1014	02	8	2	8	3	-	-
237	1900	9/25	17°53'N	155°40'W	78.4	057	17	80.2	73.9	1015	02	8	3	8	3	-	-
238	2200	9/25	18°20'N	155°55'W	78.4	064	16	80.0	73.9	1015	02	8	2	8	3	34.85	0.12
239	0100	9/26	18°45'N	156°10'W	78.5	092	16	80.3	75.6	1013	15	6,8	5	9	3	-	-
240	0400	9/26	19°11'N	156°25'W	79.8	332	06	79.8	73.7	1014	16	6,8	6	9	2	-	-
241	0700	9/26	19°36'N	156°40'W	79.6	046	12	79.8	73.7	1015	02	X	X	9	3	-	-
242	1000	9/26	20°02'N	156°56'W	78.4	051	19	78.0	73.4	1015	02	X	X	9	3	-	-
243	1310	9/26	20°27'N	157°11'W	79.2	076	13	77.9	71.6	1014	02	X	X	9	2	-	-

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35. On observations where two wave patterns were noted, the direction, period, and height of the second are carried as a footnote

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
8/2	21.2°N	157.9°W	1200	XX	14	24	00	0	1015.2	5	1.0	78.5	73.2	78.9	X	X	X	X	X	X	05	3	4
8/2	21.0°N	158.2°W	1800	99	04	22	00	0	1016.0	3	0.3	78.8	72.5	78.8	1	1	2	4	0	0	05	3	3
8/3	21.2°N	158.3°W	0000	99	07	18	02	0	1014.6	7	1.0	78.0	73.5	78.8	1	1	9	5	2	0	05	3	3
8/3	20.1°N	158.3°W	0600	99	06	14	01	0	1014.9	8	1.0	78.0	73.8	78.0	2	1	8	5	0	0	05	3	4
8/3	21.2°N	158.5°W	1200	98	07	17	00	0	1014.9	7	0.7	78.2	70.2	78.5	1	1	X	X	X	X	XX	X	X
8/3	21.4°N	158.8°W	1800	98	05	21	03	1	1016.3	0	0.7	78.1	72.0	78.4	6	5	2	4	0	1	03	2	2
8/4	21.6°N	158.7°W	0000	99	06	22	25	1	1015.9	6	1.0	77.0	72.0	79.0	1	1	3	5	7	0	07	3	3
8/4	21.5°N	157.5°W	0600	99	05	23	03	0	1015.6	0	0.7	78.0	72.4	78.5	4	4	2	4	2	0	05	3	3
8/4	21.5°N	158.2°W	1200	99	06	16	02	1	1015.2	7	0.7	77.0	71.8	77.6	4	4	X	X	X	X	05	2	2
8/4	21.9°N	158.1°W	1800	99	06	19	03	0	1015.9	0	0.7	78.1	72.0	77.8	6	5	1	5	1	0	05	2	3
8/5	21.8°N	157.8°W	0000	98	07	20	03	2	1015.6	0	0.2	79.5	72.5	78.0	7	7	7	5	X	X	06	4	3
8/5	22.2°N	157.9°W	0600	98	07	20	03	2	1016.3	0	1.4	79.1	72.7	76.5	8	8	8	6	X	X	06	4	3
8/5	21.5°N	158.2°W	1200	XX	07	20	00	2	1016.6	0	4.6	77.5	72.2	76.5	X	X	X	X	X	X	06	3	3
8/5	21.7°N	157.6°W	1800	98	07	20	01	1	1016.3	0	0.2	78.0	72.5	76.4	9	1	1	3	3	8	06	2	3
8/6	21.6°N	157.5°W	0000	98	07	20	01	1	1016.6	6	1.0	78.5	72.5	77.8	6	2	8	4	7	9	06	2	3
8/6	21.3°N	157.2°W	0600	98	07	20	02	0	1016.6	0	0.7	77.8	72.8	77.8	2	2	1	4	1	0	06	2	3
8/6	21.2°N	157.5°W	1200	XX	07	16	00	X	1017.3	6	0.2	77.5	74.0	77.0	X	X	X	X	X	X	06	3	4
8/6	21.2°N	157.7°W	1800	98	06	18	03	0	1018.0	2	1.7	78.0	71.8	77.2	6	6	2	4	0	0	07	3	3
8/8	21.0°N	157.0°W	0600	98	08	04	02	0	1014.2	6	0.7	78.8	74.6	78.0	3	2	8	5	0	X	08	2	3
8/8	20.3°N	156.4°W	1200	99	05	18	01	0	1014.2	0	1.0	78.0	74.8	78.7	2	2	X	X	X	X	09	2	0
8/8	19.5°N	156.1°W	1800	99	06	07	14	8	1014.6	0	1.4	79.0	75.2	79.6	7	6	2	5	0	1	02	2	0
8/9	18.9°N	155.3°W	0000	99	06	14	01	8	1013.5	7	1.4	79.2	72.8	77.2	3	1	9	5	0	6	07	2	1
8/9	19.0°N	154.5°W	0600	99	06	16	02	1	1013.5	0	1.4	79.2	73.0	79.0	6	5	2	6	0	8	06	2	1
8/9	18.2°N	153.7°W	1200	XX	08	20	00	X	1014.2	7	0.9	76.8	72.8	78.0	X	X	X	X	X	X	07	2	3
8/9	18.4°N	152.8°W	1800	98	07	15	01	1	1013.5	3	1.7	78.6	70.5	77.8	1	1	8	5	0	1	08	2	1
8/10	18.1°N	152.0°W	0000	98	05	15	03	0	1013.9	7	1.0	78.8	75.0	77.8	4	1	2	5	7	9	08	3	2
8/10	17.9°N	151.2°W	0600	98	06	22	02	2	1014.9	2	1.4	78.0	74.0	77.5	8	7	4	3	X	X	07	2	2
8/10	17.5°N	151.7°W	1200	97	08	14	02	8	1014.9	8	1.0	76.7	73.9	76.9	7	8	X	X	X	X	08	2	3
8/10	17.2°N	149.5°W	1800	98	06	15	15	2	1016.9	3	2.0	77.2	73.1	76.6	7	4	7	4	7	X	06	2	3
8/11	16.9°N	149.0°W	0000	98	14	30	21	2	1015.6	7	1.4	77.0	73.1	77.0	7	3	2	5	5	X	14	3	4

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
8/11	16.5°N	148.0°W	0600	98	04	18	25	8	1015.2	2	1.4	76.8	73.6	76.3	7	3	X	X	X	X	06	2	3
8/11	16.3°N	147.3°W	1200	98	06	16	01	8	1014.9	7	1.7	77.0	74.2	76.0	2	2	X	X	X	X	06	2	3
8/11	16.0°N	145.2°W	1800	98	07	20	00	0	1015.2	2	1.7	76.0	73.8	76.2	3	1	1	5	6	0	06	3	4
8/12	16.2°N	145.6°W	0000	98	05	20	01	0	1014.9	7	1.0	77.0	73.0	76.5	2	1	2	5	0	1	06	3	4
8/12	16.0°N	145.0°W	0600	98	05	22	14	8	1014.9	3	2.0	76.1	73.0	76.1	7	6	2	4	4	X	05	3	4
8/12	15.7°N	144.3°W	1000	XX	05	18	00	8	1014.2	7	1.7	75.3	72.0	75.5	X	X	X	X	X	X	05	3	5
8/12	15.4°N	143.6°W	1800	98	03	21	15	8	1013.5	2	1.0	76.8	73.0	77.5	7	7	8	4	X	X	05	3	5
8/13	14.7°N	142.5°W	0000	97	05	16	15	8	1012.2	7	1.0	77.0	74.8	78.3	8	8	7	5	X	X	07	3	5 [1/]
8/13	14.3°N	142.1°W	0600	97	02	24	61	6	1011.2	3	1.2	77.0	75.8	78.0	8	8	7	X	X	X	04	2	4
8/13	14.1°N	141.1°W	1200	97	05	23	61	6	1009.5	7	1.7	79.5	76.0	79.2	6	6	7	X	X	X	04	2	4
8/13	13.7°N	140.3°W	1800	98	08	21	01	2	1012.5	2	2.7	80.2	76.8	78.8	7	6	7	5	5	X	07	3	4
8/14	13.8°N	139.6°W	0000	98	08	20	01	2	1011.5	7	0.9	81.0	76.5	79.0	6	3	2	5	4	2	07	3	4
8/14	13.6°N	139.0°W	0600	98	07	22	15	8	1013.2	2	2.0	79.0	75.8	79.0	6	5	2	X	X	X	03	3	3
8/14	13.2°N	138.2°W	1200	98	05	16	01	1	1011.9	6	1.4	79.0	74.0	80.5	4	4	X	X	X	X	07	3	3
8/14	13.0°N	137.6°W	1800	98	03	17	16	2	1013.5	2	1.4	77.9	75.4	79.8	7	6	2	3	X	1	03	3	3
8/15	12.7°N	136.5°W	0000	97	02	10	15	6	1008.8	7	4.1	79.5	77.9	79.0	8	8	7	5	X	X	03	2	3
8/15	12.5°N	136.1°W	0300	97	14	18	16	6	1011.5	2	4.1	80.0	75.2	79.1	8	4	7	5	9	8	04	2	3
8/15	12.3°N	135.5°W	0600	97	13	20	15	6	1013.5	2	2.7	80.0	76.8	79.4	8	8	7	4	X	X	14	2	2
8/15	12.1°N	135.3°W	0900	98	13	16	01	6	1014.6	1	1.2	80.3	76.5	79.0	2	2	1	4	X	X	49	X	X
8/15	12.0°N	135.0°W	1200	98	11	10	02	2	1012.9	5	1.0	80.0	75.6	79.4	8	X	X	X	X	X	13	2	2
8/15	11.2°N	134.9°W	1800	98	12	05	01	1	1015.2	2	0.9	80.5	76.0	79.1	3	2	9	5	6	9	14	3	3
8/16	10.1°N	135.0°W	0000	98	06	12	15	8	1012.2	7	2.0	79.5	76.5	80.5	7	6	2	3	1	0	13	3	2
8/16	09.6°N	135.0°W	0600	98	04	18	02	8	1013.5	2	1.4	80.5	76.3	80.5	6	4	2	3	0	9	13	3	2
8/16	08.8°N	135.0°W	1200	98	04	17	01	1	1010.8	7	2.4	80.2	75.5	80.5	4	3	2	5	X	X	13	3	2
8/16	08.0°N	135.0°W	1800	98	09	10	15	8	1012.9	3	1.7	82.3	76.9	80.9	6	4	7	5	7	0	04	2	2
8/17	06.9°N	134.9°W	0000	97	15	08	80	8	1010.2	7	2.0	76.8	74.8	80.0	8	8	7	4	X	X	09	2	1
8/17	06.0°N	134.0°W	0600	97	15	16	80	8	1012.5	2	2.0	79.8	75.2	80.0	8	8	7	4	X	X	16	2	2
8/17	05.5°N	135.0°W	1200	XX	15	14	00	X	1009.8	6	1.7	78.0	75.2	80.0	X	X	X	X	X	X	16	2	2
8/17	04.5°N	135.0°W	1800	98	11	21	01	2	1012.5	2	2.0	78.8	73.8	78.7	4	4	1	5	7	0	14	2	4
8/18	04.3°N	134.9°W	0000	98	17	20	02	0	1010.5	7	2.0	78.2	73.2	79.3	2	2	2	3	X	X	14	2	3

1/ $d_w d_w$ 10, P_w 2, H_w 1

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
8/18	04.1°N	135.1°W	0600	98	09	17	01	0	1013.5	2	2.4	77.8	74.0	76.6	2	1	2	5	0	1	14	2	3
8/18	02.9°N	135.0°W	1200	98	12	14	03	1	1011.9	6	1.7	77.8	73.7	77.0	5	1	5	4	0	6	13	2	2
8/18	02.5°N	135.0°W	1800	98	09	18	03	1	1014.9	2	2.0	79.8	74.2	77.0	6	3	2	4	0	6	13	2	2
8/19	02.0°N	135.0°W	0000	98	08	17	03	2	1010.8	7	2.7	78.4	74.0	77.8	7	1	1	5	0	8	10	3	3
8/19	01.6°N	135.2°W	0600	98	08	18	01	1	1013.2	2	2.4	78.0	72.8	78.0	2	1	1	4	0	1	10	2	3
8/19	00.7°N	135.1°W	1200	98	09	14	02	0	1012.2	6	1.4	77.0	72.6	76.3	1	1	1	4	0	0	09	2	1
8/19	00.0°N	134.9°W	1800	98	11	18	03	1	1015.2	2	2.4	78.0	72.2	75.8	7	6	8	5	7	X	11	2	2
8/20	00.9°S	134.9°W	0000	98	11	18	02	1	1012.2	7	2.0	79.0	72.9	76.4	7	4	8	5	2	9	07	2	2
8/20	01.0°S	135.0°W	0600	98	11	17	01	1	1014.2	2	2.0	76.8	74.0	76.0	1	1	1	5	0	0	10	2	4
8/20	02.1°S	135.1°W	1200	98	11	17	03	0	1012.5	7	1.7	76.5	72.4	76.8	2	1	1	5	3	0	10	2	4
8/20	03.1°S	134.9°W	1800	98	09	16	02	0	1015.9	2	2.0	79.2	73.6	76.8	2	1	1	5	3	0	10	2	4
8/21	04.0°S	135.0°W	0000	98	12	10	01	0	1012.5	6	2.0	77.7	74.9	77.3	1	1	1	5	0	0	14	2	4 [1/]
8/21	04.5°S	135.0°W	0600	98	12	14	02	0	1014.9	2	2.4	77.4	73.5	77.2	1	1	1	5	0	0	10	2	1
8/21	05.4°S	135.0°W	1200	98	12	10	15	0	1013.2	6	1.7	77.2	73.0	77.5	2	2	2	5	0	0	10	2	1
8/21	06.2°S	135.0°W	1800	98	09	14	15	0	1015.9	2	2.7	78.2	73.2	77.7	3	2	2	4	4	0	13	2	1
8/22	07.0°S	135.0°W	0000	98	12	13	01	0	1012.5	7	2.4	78.0	73.5	77.9	3	1	1	5	7	1	11	2	1
8/22	07.9°S	135.0°W	0600	XX	11	16	00	1	1014.2	1	0.9	77.8	74.0	77.7	X	X	X	X	X	X	11	2	1
8/22	08.5°S	135.0°W	1200	98	09	18	02	0	1012.2	6	1.4	76.5	72.7	77.5	1	1	1	3	X	X	10	2	2
8/22	09.5°S	135.0°W	1800	98	09	18	03	1	1015.6	2	2.7	78.0	73.5	75.2	6	1	1	3	3	0	12	2	4
8/23	10.1°S	135.0°W	0000	98	08	18	02	0	1012.2	7	2.4	77.4	73.0	77.5	2	2	2	4	0	0	08	2	3
8/23	10.3°S	135.1°W	0600	98	14	13	02	0	1014.9	7	2.4	77.3	72.8	77.7	2	2	1	4	0	0	09	2	2
8/23	11.5°S	135.0°W	1200	98	08	15	03	1	1013.9	7	0.7	76.3	72.3	77.2	3	1	1	4	3	0	09	2	2
8/23	12.5°S	135.0°W	1800	98	10	16	01	0	1016.9	2	2.7	77.9	72.0	77.5	1	1	1	3	0	9	09	2	3
8/24	13.4°S	135.0°W	0000	98	10	08	02	0	1013.9	6	2.0	77.2	68.9	77.5	1	1	1	5	3	0	09	2	3
8/24	14.3°S	135.0°W	0600	98	05	10	02	0	1015.2	2	1.7	76.5	71.5	76.7	1	1	5	4	0	0	07	2	0
8/24	15.0°S	135.0°W	1200	98	05	10	02	0	1014.9	7	0.7	76.0	71.2	76.2	8	1	1	4	5	X	06	2	0
8/24	15.8°S	135.0°W	1800	98	07	05	15	2	1017.6	2	2.0	77.5	72.4	76.5	7	2	2	4	5	X	06	2	2
8/25	16.6°S	135.0°W	0000	98	08	05	02	2	1014.6	7	2.2	78.0	71.9	76.5	6	4	2	4	5	X	06	2	2
8/25	17.5°S	135.0°W	0600	98	02	11	03	2	1015.9	2	1.4	76.2	72.0	75.8	7	X	X	X	X	X	05	2	1
8/25	18.8°S	135.0°W	1200	XX	02	04	00	X	1014.6	7	0.9	77.0	71.0	76.1	X	X	X	X	X	X	05	2	1

1/ $d_w d_w$ 09, P_w 2, H_w 1

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
8/25	19.0°S	135.0°W	1800	98	01	10	01	0	1016.3	2	1.4	76.3	72.3	76.3	1	1	2	4	0	0	03	2	0
8/26	19.5°S	135.0°W	0000	98	01	08	02	0	1013.9	7	2.0	80.0	74.5	76.9	1	1	4	4	0	0	02	2	0
8/26	19.0°S	136.6°W	0600	98	01	07	02	0	1015.2	1	1.4	77.8	73.0	76.4	1	1	4	4	0	0	02	2	0
8/26	19.0°S	137.6°W	1200	98	35	16	03	0	1012.9	7	2.7	75.9	71.8	75.8	4	4	1	4	0	0	28	2	0
8/26	19.0°S	138.3°W	1800	98	00	15	01	1	1014.2	2	1.7	77.8	73.3	76.2	3	2	1	4	1	0	34	2	2
8/27	19.0°S	139.2°W	0000	98	32	20	15	8	1012.5	7	2.0	78.8	74.3	76.9	4	2	2	4	5	0	31	2	2
8/27	19.0°S	140.0°W	0600	98	32	15	00	0	1013.9	2	1.7	78.0	72.9	76.2	X	X	X	X	X	X	31	2	3
8/27	19.0°S	140.9°W	1200	98	32	17	01	1	1012.9	7	1.4	77.5	77.0	76.5	1	1	1	4	0	0	31	2	3
8/27	19.2°S	151.0°W	1800	98	31	16	03	0	1014.9	2	2.0	77.2	73.7	76.5	2	1	1	4	5	0	32	2	2
8/28	19.0°S	142.4°W	0000	98	31	20	01	0	1012.5	7	1.4	78.8	74.2	76.0	1	1	1	4	0	0	32	2	2
8/28	18.9°S	143.0°W	0600	98	32	20	03	1	1014.9	2	1.7	78.0	74.7	77.1	8	X	X	X	X	X	32	2	3
8/28	17.8°S	142.9°W	1200	98	29	14	03	2	1014.6	7	0.3	77.4	72.4	76.9	8	8	5	4	0	0	32	2	0
8/28	17.4°S	143.0°W	1800	98	33	07	03	1	1016.9	2	2.2	77.4	72.2	77.3	6	5	2	4	2	0	26	2	1
8/29	16.3°S	142.9°W	0000	98	35	08	02	0	1014.9	7	2.0	80.0	72.1	78.7	2	2	4	5	0	0	02	3	2
8/29	16.3°S	143.0°W	0600	98	06	08	01	0	1016.6	2	1.5	78.8	73.0	78.0	1	1	1	5	0	0	02	2	0
8/29	13.2°S	143.0°W	1200	98	07	11	02	0	1015.2	7	0.9	77.3	73.0	78.0	1	1	1	5	0	0	04	2	0
8/29	14.1°S	143.0°W	1800	98	09	18	02	0	1017.3	2	2.0	78.0	69.9	77.9	1	1	1	5	0	0	07	2	2
8/30	11.6°S	143.0°W	0000	98	09	18	02	0	1014.9	7	2.0	82.0	74.0	78.4	1	1	1	5	0	0	08	2	3
8/30	12.2°S	143.0°W	0600	98	10	17	02	0	1015.6	2	1.4	78.8	73.5	78.2	1	1	X	X	X	X	07	2	3
8/30	11.4°S	143.0°W	1200	98	09	20	02	0	1012.9	7	2.4	77.8	71.8	78.7	1	1	1	4	0	0	06	2	4
8/30	10.2°S	143.0°W	1800	98	10	20	03	0	1014.2	2	1.4	78.9	72.8	78.5	2	2	2	5	0	0	10	2	4
8/31	10.0°S	143.0°W	0000	98	08	20	02	2	1010.5	7	2.4	78.0	74.0	78.9	6	6	2	5	0	0	10	2	4
8/31	09.3°S	143.0°W	0600	98	06	18	00	2	1012.5	2	1.7	89.0	74.2	78.8	2	X	X	X	X	X	09	2	3
8/31	08.7°S	143.0°W	1200	98	06	18	00	0	1010.2	7	1.4	79.2	74.2	78.3	2	X	X	X	X	X	09	2	3
8/31	08.3°S	143.0°W	1800	98	09	21	00	X	1011.9	2	2.0	79.2	73.4	78.2	1	1	1	4	0	0	09	2	3
9/1	07.0°S	143.0°W	0000	98	08	15	03	0	1009.1	7	2.7	79.2	75.2	78.8	2	2	2	4	0	0	07	3	4
9/1	06.3°S	143.0°W	0600	98	07	18	01	2	1009.8	2	2.0	80.0	75.4	78.4	2	X	X	X	X	X	07	3	1
9/1	05.5°S	143.0°W	1200	97	08	18	00	1	1009.8	7	1.4	79.5	75.4	78.5	X	X	X	X	X	X	07	3	3
9/1	04.6°S	143.1°W	1800	97	07	14	02	0	1012.9	2	2.4	78.9	74.9	77.8	2	2	2	4	0	0	07	3	2
9/2	04.0°S	143.0°W	0000	98	10	15	03	0	1009.5	7	3.1	78.3	73.8	78.3	3	2	2	5	0	0	07	2	2[1/]

[1/] $d_w d_w$ 14, P_w 2, H_w 1

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
9/2	03.0°S	143.1°W	0600	98	11	15	01	0	1010.2	2	1.7	80.0	73.9	79.1	2	X	X	X	X	X	07	3	2
9/2	02.0°S	143.0°W	1200	98	11	15	00	0	1008.5	6	1.0	77.5	73.1	77.7	2	2	2	4	0	0	10	2	2
9/2	01.5°S	143.1°W	1800	98	08	16	03	0	1009.8	2	1.4	78.2	73.9	77.4	1	1	2	0	0	0	10	2	2
9/3	00.4°S	143.0°W	0000	98	09	13	03	0	1006.8	7	2.7	77.9	73.8	77.9	2	2	2	0	0	0	15	2	2
9/3	00.0°N	143.0°W	0600	98	10	16	02	0	1008.8	2	2.0	77.8	75.2	77.5	2	2	1	4	0	0	10	2	2
9/3	00.9°N	142.9°W	1200	98	11	13	03	1	1007.1	6	2.4	77.6	75.2	76.9	8	8	5	4	0	0	10	2	2
9/3	02.2°N	143.0°W	1800	98	11	14	02	2	1010.5	1	2.7	79.4	76.9	78.8	7	7	8	4	0	0	12	2	1
9/4	02.0°N	143.6°W	0000	98	14	16	01	1	1008.1	7	2.0	79.2	74.0	79.1	4	3	1	4	3	0	12	2	1
9/4	02.0°N	144.6°W	0600	98	16	14	63	1	1010.2	2	2.0	78.9	74.6	80.0	X	X	X	X	X	X	12	2	2
9/4	02.0°N	145.5°W	1200	98	11	16	03	1	1008.8	7	2.0	79.0	76.9	79.8	4	X	X	X	X	X	12	2	2
9/4	01.9°N	146.6°W	1800	98	14	17	02	0	1010.5	2	1.4	80.0	77.8	80.6	1	2	1	4	0	5	14	2	2
9/5	02.0°N	147.5°W	0000	98	11	16	03	2	1007.8	6	2.4	80.2	77.1	80.5	8	2	7	4	0	8	11	2	2
9/5	02.0°N	148.6°W	0600	XX	11	12	00	X	1010.2	2	2.4	81.8	77.9	80.3	X	X	X	X	X	X	11	2	2
9/5	02.0°N	149.6°W	1200	98	11	15	00	0	1009.8	7	1.7	80.5	76.8	80.2	X	X	X	X	X	X	11	2	2
9/5	02.0°N	150.5°W	1800	98	13	15	01	1	1011.5	2	2.0	80.0	76.8	80.0	2	2	2	4	7	0	12	2	2
9/6	01.5°N	151.0°W	0000	98	12	18	02	0	1009.5	7	1.7	81.0	76.7	80.0	3	2	2	4	0	1	12	2	2
9/6	01.7°N	151.0°W	0600	98	09	16	01	0	1010.8	3	2.0	79.8	76.8	79.5	1	1	1	4	0	0	16	2	2
9/6	00.0°S	151.0°W	1200	98	11	16	02	0	1010.8	5	1.9	78.1	75.2	78.3	2	X	X	X	X	X	12	2	2
9/6	00.4°S	151.4°W	1800	98	09	16	02	0	1012.2	2	1.4	78.8	76.3	78.0	1	1	1	4	0	0	12	2	2
9/7	01.3°S	151.3°W	0000	98	09	12	16	0	1009.8	7	2.4	79.4	77.8	77.8	1	1	2	4	0	0	12	2	3
9/7	02.0°S	151.0°W	0600	98	11	13	02	0	1011.5	1	1.7	78.8	75.0	78.0	2	1	2	4	0	1	11	2	2
9/7	02.8°S	151.0°W	1200	98	09	17	02	0	1012.2	7	1.0	78.7	73.8	77.9	1	1	X	X	X	X	12	2	2
9/7	03.7°S	151.0°W	1800	98	10	21	02	0	1012.9	2	1.7	79.3	74.2	78.2	2	2	1	4	0	0	07	3	3
9/8	04.7°S	151.0°W	0000	98	09	18	03	0	1010.8	7	1.9	79.5	74.0	79.0	6	6	2	4	0	0	09	2	3
9/8	05.5°S	151.1°W	0600	98	09	18	02	2	1012.2	2	1.7	78.8	74.0	79.0	5	5	2	4	0	0	09	2	3
9/8	06.2°S	151.1°W	1200	98	07	17	01	0	1012.2	0	1.4	79.0	73.0	78.9	1	1	1	4	0	0	14	3	4
9/8	07.0°S	151.1°W	1800	98	05	18	03	0	1014.2	2	2.7	79.9	72.5	79.6	3	2	2	4	2	0	08	3	4
9/9	08.0°S	151.0°W	0000	98	07	14	02	0	1012.5	6	2.0	81.5	72.4	80.8	1	1	1	5	0	6	08	2	3
9/9	08.7°S	151.0°W	0600	98	11	12	03	0	1013.2	3	1.4	79.8	73.3	80.0	2	2	1	4	0	0	08	2	3
9/9	09.5°S	151.0°W	1200	98	09	14	03	1	1012.5	8	1.4	78.5	73.8	79.4	6	6	5	4	0	0	08	2	2

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
9/9	10.1°S	151.0°W	1800	98	09	14	15	8	1013.9	2	1.7	79.0	74.9	79.4	4	4	3	4	0	0	08	2	2
9/10	10.9°S	151.0°W	0000	98	05	11	03	2	1011.2	7	2.0	78.6	74.3	79.2	6	2	9	4	6	6	12	2	3 [1/]
9/10	11.5°S	151.0°W	0600	98	07	12	02	0	1012.9	1	1.5	77.8	72.8	79.2	2	1	8	4	1	0	00	X	0
9/10	12.3°S	151.0°W	1200	XX	09	14	00	X	1011.9	7	1.7	79.0	76.0	79.0	X	X	X	X	X	X	09	2	2
9/10	13.2°S	151.0°W	1800	98	05	18	01	8	1012.9	2	1.0	80.0	75.0	78.9	4	3	2	4	3	1	05	2	2
9/11	14.2°S	151.0°W	0000	98	01	15	15	1	1010.5	7	2.4	78.8	74.3	79.1	3	2	2	4	7	0	03	2	1
9/11	15.0°S	150.9°W	0600	XX	01	12	XX	1	1010.5	3	1.4	80.0	75.0	79.2	X	X	X	X	X	X	04	2	1
9/11	15.9°S	150.2°W	1200	97	05	14	60	5	1008.5	5	1.4	79.0	75.0	79.0	8	8	4	3	X	X	05	2	2
9/11	16.5°S	150.0°W	1800	98	33	18	01	6	1010.2	1	1.0	77.8	73.4	78.4	5	3	7	4	7	0	33	2	4
9/19	17.0°S	150.3°W	0600	98	16	09	02	2	1014.2	2	1.0	77.2	73.1	79.2	7	5	2	6	3	0	00	X	0
9/19	16.4°S	151.0°W	1200	98	16	03	15	8	1012.5	6	1.4	76.5	72.5	78.6	7	7	8	4	X	X	14	2	1
9/19	15.8°S	151.8°W	1800	98	05	09	15	8	1014.6	2	2.0	79.8	74.3	79.0	5	2	9	4	6	9	11	2	X [2/]
9/20	15.4°S	152.3°W	0000	98	05	07	01	2	1013.2	6	1.7	81.3	77.8	79.2	5	2	8	5	2	X	05	2	1 [3/]
9/20	14.8°S	152.9°W	0600	98	08	04	02	0	1013.5	2	1.4	81.9	74.0	79.8	2	2	1	4	0	0	21	2	1
9/20	14.5°S	153.6°W	1200	98	07	12	03	1	1012.2	7	2.0	80.1	74.8	79.6	6	6	1	4	0	0	20	2	1
9/20	14.5°S	154.4°W	1800	98	08	10	02	0	1014.6	1	2.0	79.8	72.9	79.7	1	1	8	4	0	0	06	3	1
9/21	14.5°S	155.2°W	0000	90	07	10	03	0	1012.2	7	2.0	84.7	76.5	80.0	2	2	2	5	0	0	08	3	1
9/21	14.5°S	156.1°W	0600	98	08	10	02	0	1012.9	3	1.4	80.9	74.8	79.6	2	6	2	5	0	0	16	3	2
9/21	14.5°S	156.8°W	1200	XX	10	08	00	0	1012.5	7	1.4	80.5	76.0	79.6	X	X	X	X	X	X	16	3	2
9/21	14.5°S	157.9°W	1800	98	12	10	15	8	1013.2	3	1.4	79.1	75.0	79.8	6	6	9	4	0	0	06	2	2 [4/]
9/22	14.5°S	158.5°W	0000	98	02	10	15	8	1011.9	7	1.7	79.8	73.8	80.3	6	6	9	4	0	0	16	3	3 [5/]
9/22	14.5°S	159.6°W	0600	98	14	13	01	8	1012.5	2	1.0	79.2	74.8	79.8	2	2	4	4	0	0	16	2	2
9/22	14.4°S	160.0°W	1200	98	13	18	02	0	1012.5	0	0.7	78.0	75.0	79.8	2	2	1	4	0	0	14	2	2
9/22	13.5°S	160.0°W	1800	98	10	07	02	0	1011.9	2	0.9	80.0	74.2	79.8	3	2	2	4	3	0	11	2	2
9/23	12.8°S	160.0°W	0000	98	07	07	15	2	1010.2	7	2.4	80.7	75.2	81.2	6	4	3	4	3	0	11	2	2
9/23	11.6°S	160.1°W	0600	98	09	13	15	8	1010.2	3	1.4	80.8	74.8	80.5	2	2	3	4	0	0	10	2	1
9/23	11.2°S	160.0°W	1200	98	11	13	02	0	1010.2	8	1.0	80.3	75.8	80.8	2	2	1	4	0	0	11	2	2
9/23	10.3°S	160.0°W	1800	98	12	08	15	1	1011.2	2	1.5	81.1	76.5	80.3	6	5	9	3	1	0	11	2	2
9/24	09.9°S	160.0°W	0000	98	07	15	03	0	1008.8	6	2.4	81.9	76.6	81.0	7	5	2	3	0	8	07	2	2
9/24	08.6°S	160.0°W	0600	XX	05	15	00	X	1009.1	3	1.4	81.0	77.0	81.0	X	X	X	X	X	X	09	2	2

[1/] $d_w d_w$ 08, P_w 2, H_w 3 [2/] $d_w d_w$ 06, P_w 2, H_w 1 [3/] $d_w d_w$ 02, P_w 2, H_w 1 [4/] $d_w d_w$ 16, P_w 3, H_w 3

[5/] $d_w d_w$ 08, P_w 2, H_w 2

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
9/24	08.2°S	160.0°W	1200	98	07	12	02	1	1009.8	6	0.3	81.0	74.5	81.3	5	4	2	3	0	1	07	2	2
9/24	07.5°S	159.9°W	1800	98	06	12	03	2	1011.5	2	1.9	81.0	75.2	80.5	6	1	1	4	0	5	07	2	2
9/25	06.8°S	160.0°W	0000	98	05	12	03	2	1009.1	7	3.1	81.8	75.2	81.0	7	1	2	4	0	5	06	2	1
9/25	05.8°S	160.0°W	0600	98	05	08	02	2	1010.2	3	1.4	81.8	77.3	80.6	8	1	2	4	2	5	06	2	1
9/25	05.1°S	160.0°W	1200	98	07	16	00	2	1009.1	8	1.5	79.8	74.7	80.1	X	X	X	X	X	X	06	2	1
9/25	04.5°S	160.0°W	1800	98	06	18	02	1	1011.5	2	1.7	79.5	74.8	79.8	4	1	2	4	0	5	06	2	1
9/26	03.8°S	160.0°W	0000	98	10	13	01	0	1008.5	7	2.0	80.8	74.0	80.1	1	1	1	4	0	5	08	2	3
9/26	02.6°S	159.9°W	0600	98	09	14	03	0	1009.1	2	1.4	81.2	74.8	79.9	6	6	2	3	0	0	09	2	3
9/26	02.0°S	160.0°W	1200	98	12	18	00	0	1008.8	5	1.4	79.9	73.9	79.0	X	X	X	X	X	X	12	2	2
9/26	01.3°S	160.0°W	1800	98	12	16	00	X	1009.5	3	0.7	80.2	75.2	78.8	1	1	2	4	0	0	12	2	3
9/27	00.4°S	160.0°W	0000	98	12	14	03	0	1008.1	7	1.7	80.6	75.2	78.8	3	2	3	4	4	0	09	2	4
9/27	00.0°N	160.0°W	0600	98	10	14	03	0	1009.1	2	2.0	80.2	74.4	79.6	3	1	2	4	0	5	09	2	3
9/27	00.5°N	159.3°W	1200	98	10	15	02	0	1009.1	8	1.4	79.9	74.4	78.8	2	1	2	4	0	5	08	2	2
9/27	01.0°N	159.1°W	1800	98	12	08	02	0	1009.1	3	1.4	80.2	75.0	79.4	3	1	1	4	7	1	09	2	2
9/28	01.4°N	158.3°W	0000	98	11	13	02	0	1008.8	7	2.0	80.8	74.8	79.7	2	1	1	4	0	5	11	2	2
9/28	01.7°N	157.7°W	0600	XX	08	17	00	0	1008.8	3	1.4	81.9	75.3	79.8	X	X	X	X	X	X	11	2	2
9/29	02.0°N	157.8°W	0000	98	11	16	02	0	1008.8	7	2.7	82.0	74.8	79.8	5	2	2	4	0	5	XX	X	X
9/29	02.0°N	159.0°W	0600	98	12	12	01	0	1010.5	2	2.0	80.5	73.8	80.5	2	1	2	4	X	X	13	2	1
9/29	02.0°N	160.0°W	1200	98	12	12	03	0	1009.5	7	2.0	80.2	75.4	80.2	3	X	X	X	X	X	14	2	1
9/29	03.0°N	160.0°W	1800	98	11	14	03	0	1011.9	1	1.4	81.4	75.1	80.2	6	2	1	3	0	9	11	2	1
9/30	03.6°N	160.0°W	0000	98	11	11	03	0	1009.8	7	2.0	82.1	75.0	80.3	4	2	1	4	0	9	11	2	1
9/30	04.3°N	160.1°W	0600	98	08	14	01	0	1010.2	2	1.7	81.5	74.6	80.9	2	1	1	4	0	5	11	1	1
9/30	05.1°N	160.0°W	1200	98	09	11	02	0	1010.8	0	0.7	81.6	75.8	80.3	X	X	X	X	X	X	11	2	1
9/30	06.0°N	160.0°W	1800	98	07	15	15	0	1012.9	2	2.4	82.6	74.5	82.2	3	2	3	4	0	1	07	2	1
10/1	06.8°N	160.0°W	0000	98	07	18	02	6	1010.5	7	2.7	84.2	76.0	82.4	6	5	2	4	0	1	08	2	2
10/1	07.6°N	160.0°W	0600	98	07	18	02	1	1010.5	2	0.9	83.0	76.3	82.6	4	X	X	X	X	X	08	2	2
10/1	08.1°N	160.0°W	1200	98	07	18	00	1	1009.8	7	2.0	81.9	74.8	82.3	X	X	X	X	X	X	08	2	2
10/1	09.3°N	159.9°W	1800	98	05	18	15	1	1010.8	3	2.4	80.3	75.8	81.5	5	5	9	4	0	0	06	2	2
10/2	10.0°N	160.0°W	0000	98	04	18	01	8	1009.8	7	1.7	81.5	75.7	81.4	3	3	3	4	0	0	04	2	3
10/2	10.5°N	160.0°W	0600	98	05	18	15	8	1010.2	2	1.7	81.3	75.7	81.0	3	3	9	4	0	0	04	2	4

Table 3.--Summary of weather observations (USWB 1210-F), Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
10/2	11.1°N	160.0°W	1200	98	05	18	01	0	1010.2	6	1.9	79.7	74.8	79.8	2	2	X	X	X	X	06	2	4
10/2	12.0°N	160.1°W	1800	98	05	17	02	0	1011.5	0	1.7	80.3	74.7	79.8	5	5	8	4	0	0	06	2	4
10/3	12.6°N	160.0°W	0000	98	06	15	03	0	1009.8	7	2.0	81.7	74.6	80.0	6	5	2	3	0	1	06	2	3
10/3	13.5°N	159.7°W	0600	98	06	18	01	1	1011.9	1	1.7	80.1	73.1	79.2	2	X	X	X	X	X	07	2	2
10/3	14.2°N	159.6°W	1200	98	11	16	02	0	1011.9	7	1.5	79.7	73.8	78.9	2	X	X	X	X	X	07	2	2
10/3	15.5°N	159.2°W	1800	98	06	19	03	0	1012.5	2	1.4	77.8	73.2	78.5	4	4	2	4	0	0	07	2	3
10/4	16.1°N	159.1°W	0000	98	06	18	03	0	1011.9	6	1.4	80.2	74.0	79.5	7	5	2	4	0	4	07	2	3
10/4	16.9°N	158.9°W	0600	98	07	16	02	2	1013.5	1	2.0	80.3	74.8	79.3	8	9	X	0	X	X	07	2	3
10/4	17.6°N	158.8°W	1200	98	08	14	00	1	1014.6	7	0.3	78.8	73.5	79.1	9	9	X	0	X	X	07	2	3
10/4	18.5°N	158.7°W	1800	98	09	12	01	1	1015.6	2	1.7	78.9	73.6	79.3	3	2	2	4	0	4	07	2	3
10/5	19.5°N	158.4°W	0000	98	01	04	15	8	1013.5	7	2.0	79.8	72.0	79.8	6	2	3	4	0	6	10	2	1
10/5	20.4°N	158.1°W	0600	98	23	05	00	2	1014.2	2	1.4	80.0	73.6	81.2	9	9	X	0	X	X	00	X	0

Table 4.--Summary of weather observations (USWB 1210-F), Charles H. Gilbert cruise 30

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
8/7	20.5°N	156.4°W	1800	98	03	12	03	X	1016.6	X	XX	78.0	72.0	78.5	4	1	1	5	1	2	15	3	1
8/8	19.0°N	156.8°W	0600	98	12	14	02	1	1014.2	4	0.0	80.0	72.7	79.5	X	X	X	X	X	X	XX	X	X
8/8	17.9°N	154.4°W	1800	98	07	12	25	2	1014.2	2	0.7	76.0	73.0	77.3	6	5	4	5	2	X	10	6	3
8/9	17.1°N	152.9°W	0600	XX	08	12	02	1	1013.2	1	0.7	78.0	72.1	78.5	X	X	X	X	X	X	XX	X	3
8/9	15.9°N	151.5°W	1800	98	07	23	02	1	1013.2	1	2.0	78.8	74.6	78.3	6	5	4	5	2	X	08	3	4
8/10	15.4°N	149.8°W	0600	XX	09	16	02	2	1014.2	2	2.0	77.0	74.6	77.4	X	X	X	X	X	X	XX	X	5
8/10	14.5°N	148.5°W	1800	98	06	22	02	2	1014.9	1	1.4	78.6	74.5	77.5	5	4	1	5	2	X	08	4	5
8/11	13.2°N	146.9°W	0600	98	05	17	20	1	1013.5	1	1.4	78.1	74.3	79.4	X	X	X	X	X	X	XX	X	4
8/11	12.2°N	146.1°W	1800	98	07	18	02	1	1012.9	1	1.4	80.0	76.4	80.5	4	4	2	5	0	0	08	2	3
8/12	11.0°N	144.9°W	0600	98	07	16	02	1	1012.5	1	1.4	80.0	75.6	81.0	X	X	X	X	X	X	XX	X	4
8/12	09.9°N	143.7°W	1800	98	08	06	02	2	1012.9	1	2.0	80.7	76.0	81.2	7	6	4	5	2	X	18	2	2
8/13	08.5°N	141.9°W	0600	98	22	10	02	2	1011.9	1	1.4	79.9	74.6	81.2	X	X	X	X	X	X	XX	X	4
8/13	07.2°N	140.3°W	1800	98	20	09	02	2	1012.5	1	2.0	81.3	74.7	80.9	6	4	2	5	1	4	15	2	2
8/14	06.1°N	139.0°W	0600	98	11	09	02	2	1012.9	1	1.4	79.5	74.6	80.8	X	X	X	X	X	X	XX	X	3
8/14	05.0°N	137.6°W	1800	98	13	15	03	1	1013.2	1	2.0	80.0	74.6	80.7	6	6	4	5	0	0	13	2	4
8/15	03.8°N	136.3°W	0600	98	12	19	02	1	1012.9	1	2.0	79.1	73.5	80.5	X	X	X	X	X	X	XX	X	4
8/15	03.0°N	135.3°W	1800	98	15	16	03	1	1013.9	1	2.0	77.3	72.8	76.8	7	6	4	4	6	X	15	2	3
8/16	02.0°N	134.0°W	0600	98	13	15	02	1	1012.9	2	2.0	78.0	72.8	77.3	X	X	X	X	X	X	XX	X	4
8/16	01.6°N	134.1°W	1800	98	11	16	02	0	1013.9	2	1.4	78.9	73.4	78.0	2	2	2	5	6	0	12	2	3
8/17	01.0°N	133.7°W	0600	98	13	16	02	0	1013.2	2	2.0	77.5	71.2	78.3	X	X	X	X	X	X	XX	X	3
8/17	00.3°N	133.6°W	1800	98	12	16	03	1	1014.2	1	1.9	77.6	71.0	78.1	4	4	2	5	0	0	10	4	4
8/18	00.1°N	133.1°W	0600	98	13	14	02	1	1013.5	2	2.0	77.2	72.5	78.0	X	X	X	X	X	X	XX	X	3
8/18	01.0°S	132.6°W	1800	98	10	17	02	1	1015.6	1	2.4	76.2	71.3	75.2	6	3	1	5	0	2	12	2	3
8/19	01.2°S	132.1°W	0600	90	12	17	02	1	1014.2	2	2.0	76.0	72.3	75.5	X	X	X	X	X	X	XX	X	3
8/19	02.7°S	131.7°W	1800	98	27	11	03	1	1015.9	1	2.4	76.7	72.7	76.0	6	6	3	5	0	0	11	2	3
8/20	03.2°S	131.7°W	0600	98	12	16	02	1	1014.9	2	2.0	76.3	72.0	75.8	X	X	X	X	X	X	XX	X	3
8/20	04.4°S	131.8°W	1800	98	12	13	01	0	1015.9	1	1.9	76.9	73.0	76.8	1	1	1	5	0	0	12	2	3
8/21	04.8°S	131.8°W	0600	98	12	15	02	0	1015.2	2	2.4	77.4	72.3	76.8	X	X	X	X	X	X	XX	X	3
8/21	05.9°S	132.4°W	1800	98	10	16	02	0	1015.9	1	2.4	78.0	71.9	77.3	1	1	2	5	0	0	12	2	3
8/22	06.2°S	132.1°W	0600	98	11	15	02	1	1014.2	2	1.7	77.5	72.3	77.6	X	X	X	X	X	X	XX	X	3

Table 4.--Summary of weather observations (USWB 1210-F), Charles H. Gilbert cruise 30 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
8/22	07.4°S	132.2°W	1800	98	12	13	02	1	1015.9	1	2.0	76.8	71.8	77.2	1	1	2	5	0	0	12	2	4
8/23	08.0°S	132.1°W	0600	98	11	15	02	1	1013.9	1	2.0	77.0	71.5	77.4	X	X	X	X	X	X	XX	X	4
8/23	09.3°S	132.3°W	1800	98	10	14	20	2	1015.9	1	2.0	76.5	70.4	77.3	8	8	2	5	0	0	09	2	3
8/24	09.9°S	132.2°W	0600	98	11	15	02	1	1014.6	2	2.0	76.5	68.7	77.3	X	X	X	X	X	X	XX	X	3
8/24	10.7°S	132.1°W	1800	98	10	14	01	0	1015.9	1	2.0	76.9	71.5	76.8	1	1	2	5	0	0	10	2	3
8/25	11.1°S	132.0°W	0600	98	11	15	02	0	1014.6	2	1.5	76.0	70.3	76.5	X	X	X	X	X	X	XX	X	3
8/25	12.1°S	132.2°W	1800	98	10	13	01	0	1015.9	1	2.0	76.3	70.6	76.4	1	7	2	5	2	0	12	2	3
8/26	12.5°S	132.1°W	0600	98	10	15	02	1	1015.2	1	1.7	76.0	70.4	76.6	X	X	X	X	X	X	XX	X	3
8/26	13.4°S	132.2°W	1800	98	11	14	02	1	1016.6	1	2.0	70.9	69.8	75.8	4	4	4	5	0	0	09	2	3
8/27	13.0°S	132.5°W	0600	98	11	15	02	0	1015.9	1	1.7	75.9	70.5	76.4	X	X	X	X	X	X	XX	X	3
8/27	12.3°S	133.3°W	1800	98	10	18	02	2	1016.6	1	1.7	76.8	71.6	76.9	4	3	1	5	6	0	12	2	3
8/28	12.0°S	132.6°W	0600	98	15	15	02	0	1015.6	1	1.5	75.5	69.8	76.8	X	X	X	X	X	X	XX	X	3
8/28	11.4°S	134.5°W	1800	98	11	16	02	0	1016.6	1	1.7	76.8	71.2	77.0	1	1	2	5	6	0	12	2	3
8/29	11.1°S	134.9°W	0600	98	13	17	02	0	1015.2	1	1.0	76.8	70.3	77.5	X	X	X	X	X	X	XX	X	3
8/29	10.5°S	135.8°W	1800	98	10	17	02	0	1016.6	1	2.0	77.0	69.8	77.3	1	1	2	5	6	0	10	2	3
8/30	10.2°S	135.9°W	0600	98	10	15	02	1	1015.9	2	1.7	76.5	71.3	77.6	X	X	X	X	X	X	XX	X	3
8/30	09.6°S	136.9°W	1800	98	14	20	25	2	1014.6	0	1.4	77.2	72.4	78.0	4	3	1	5	7	0	11	2	4
8/31	09.3°S	137.0°W	0600	98	09	18	60	0	1012.9	2	1.7	77.4	73.0	78.0	X	X	X	X	X	X	XX	X	4
8/31	08.7°S	138.0°W	1800	98	09	16	80	2	1013.5	1	1.7	77.0	72.4	78.0	7	6	7	4	7	0	09	2	4
9/1	08.3°S	138.2°W	0600	98	XX	XX	02	1	1011.9	2	1.7	78.0	70.7	78.0	X	X	X	X	X	X	XX	X	4
9/1	07.5°S	139.0°W	1800	98	09	08	02	1	1015.9	1	2.0	78.7	72.0	78.3	3	2	2	5	6	0	10	2	2
9/2	07.8°S	139.0°W	0600	98	12	17	25	1	1011.5	1	1.5	77.8	74.1	78.4	X	X	X	X	X	X	XX	X	3
9/2	08.8°S	139.2°W	1800	99	12	20	01	1	1012.5	1	2.0	78.6	72.4	78.2	3	2	1	5	6	0	11	2	4
9/3	09.2°S	139.2°W	0600	99	11	19	02	1	1010.2	1	1.5	78.0	72.8	78.3	X	X	X	X	X	X	XX	X	4
9/3	09.1°S	140.2°W	1800	99	11	14	03	1	1013.2	1	2.7	79.0	71.4	78.1	7	7	5	5	0	0	09	2	4
9/4	10.1°S	139.7°W	0600	98	11	19	02	1	1012.9	2	2.0	77.9	71.0	78.4	X	X	X	X	X	X	XX	X	4
9/4	08.9°S	140.1°W	1800	98	13	14	03	1	1013.2	2	2.4	78.6	75.0	78.2	7	6	2	4	7	0	11	2	3
9/7	08.6°S	140.4°W	1800	99	09	12	02	0	1015.2	1	2.2	80.3	72.0	78.5	1	1	1	5	0	0	10	2	2
9/8	08.0°S	140.7°W	0600	98	12	02	02	1	1013.9	4	1.0	78.8	73.6	78.4	X	X	X	X	X	X	30	2	0
9/8	07.8°S	140.3°W	1800	98	10	17	02	0	1015.2	2	2.5	80.0	72.8	78.4	1	1	1	5	0	0	10	2	3

Table 4.--Summary of weather observations (USWB 1210-F), Charles H. Gilbert cruise 30 (cont'd)

Date, 1956	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
9/9	08.9°S	139.9°W	0600	98	12	12	02	1	1014.6	2	1.7	79.8	73.8	78.7	X	X	X	X	X	X	10	2	2
9/9	08.8°S	140.0°W	1800	98	08	07	02	1	1015.2	2	1.4	81.2	73.0	79.2	4	4	1	5	0	0	XX	X	0
9/10	08.8°S	140.0°W	0600	98	00	00	02	1	1013.9	2	1.4	78.6	72.3	79.7	X	X	X	X	X	X	00	X	0
9/10	08.7°S	139.2°W	1800	98	11	13	02	0	1015.2	2	2.4	79.0	73.4	78.2	3	3	1	5	0	0	11	2	3
9/11	09.7°S	139.9°W	0600	98	07	10	02	0	1015.9	2	0.7	78.2	71.5	78.5	X	X	X	X	X	X	04	2	1
9/11	09.8°S	139.0°W	1800	98	09	16	02	0	1014.6	1	1.7	79.0	71.3	77.9	4	4	1	5	0	0	09	2	3
9/12	10.2°S	138.9°W	1800	99	08	12	02	0	1013.9	2	2.4	81.2	69.0	77.9	1	1	1	5	0	0	09	2	2
9/14	09.4°S	140.0°W	0600	99	00	00	02	0	1013.2	1	1.2	78.6	72.0	78.8	X	X	X	X	X	X	12	2	1
9/14	09.0°S	140.1°W	1800	98	09	10	02	0	1013.9	2	1.5	79.5	72.0	78.2	3	2	1	5	1	9	XX	X	0
9/15	08.9°S	140.2°W	0600	98	22	06	02	0	1012.2	2	1.2	78.4	72.0	79.2	X	X	X	X	X	X	00	X	0
9/16	08.9°S	140.1°W	0600	99	30	01	02	0	1012.2	1	0.7	76.2	68.7	79.0	X	X	X	X	X	X	00	X	0
9/17	08.7°S	140.7°W	0600	99	03	07	02	0	1012.5	2	1.4	78.2	69.3	79.2	X	X	X	X	X	X	00	X	0
9/17	07.5°S	141.3°W	1800	98	09	17	02	0	1013.5	1	1.7	80.0	71.3	78.5	1	1	1	5	0	0	09	2	2
9/18	07.6°S	141.4°W	0600	98	07	15	02	0	1011.9	1	2.0	77.8	71.5	78.1	X	X	X	X	X	X	07	2	3
9/18	05.5°S	142.5°W	1800	98	10	14	02	0	1013.5	1	2.4	79.4	72.8	78.0	2	2	1	5	0	0	08	2	3
9/19	04.0°S	143.3°W	0600	98	10	14	02	0	1011.2	2	2.4	78.4	72.8	78.0	X	X	X	X	X	X	08	2	3
9/19	02.4°S	144.5°W	1800	98	09	14	60	1	1012.9	1	2.2	79.0	74.2	77.9	7	7	2	5	0	0	08	2	3
9/20	00.5°S	145.6°W	0600	98	07	13	03	1	1011.5	2	1.7	77.5	73.4	77.5	5	5	1	5	0	0	08	2	3
9/20	01.0°N	146.2°W	1800	98	11	16	03	1	1013.2	1	2.5	77.8	73.1	77.9	4	4	1	4	0	0	09	2	3
9/21	02.6°N	147.2°W	0600	98	10	12	03	0	1011.5	2	2.7	77.8	73.1	77.3	4	4	1	5	0	0	08	2	3
9/21	04.5°N	148.5°W	1800	98	12	13	02	1	1011.2	2	2.4	79.5	73.2	77.9	3	2	1	5	1	8	11	2	3
9/22	06.2°N	149.5°W	0600	98	16	12	03	1	1010.8	2	2.0	81.3	74.7	82.1	X	X	X	X	X	X	11	2	2
9/22	08.0°N	150.1°W	1800	98	18	09	02	2	1011.2	2	2.0	85.0	75.3	82.1	7	2	1	5	7	9	14	2	2
9/23	09.7°N	151.0°W	0600	98	06	07	02	6	1010.5	2	2.0	81.1	75.2	82.0	X	X	X	X	X	X	05	2	1
9/23	11.0°N	151.9°W	1800	98	05	09	01	6	1011.5	2	2.4	81.8	76.3	81.0	2	2	2	5	3	5	03	2	3
9/24	12.8°N	152.9°W	0600	98	07	17	80	8	1011.9	2	1.7	80.2	76.4	80.0	X	X	X	X	X	X	03	2	3
9/24	14.4°N	154.0°W	1800	98	06	18	01	1	1012.9	2	1.9	80.0	74.9	79.2	2	2	1	5	0	0	05	2	4
9/25	15.9°N	154.8°W	0600	98	07	17	01	1	1013.9	1	2.0	80.4	73.7	78.4	X	X	X	X	X	X	05	2	4
9/25	18.7°N	155.6°W	1800	98	06	15	03	1	1015.2	2	2.0	78.3	73.0	78.4	5	5	1	5	0	0	05	2	4
9/26	19.5°N	156.6°W	0600	99	07	05	01	1	1014.6	2	1.7	79.0	73.0	79.2	X	X	X	X	X	X	05	2	2
9/26	21.7°N	157.6°W	1800	99	05	17	02	0	1015.9	1	1.4	79.3	73.6	79.1	3	3	1	5	0	0	05	2	3

Table 5.--Transparency, water color determinations, and related observations, Charles H. Gilbert cruise 30

Date, 1956	Noon position		Secchi disc, fathoms	Water color (Forel)	Sea [1/]	Wind [2/]	Percent sky cover
	Latitude	Longitude					
8/17	00°20'N	133°26'W	9	4	4	SE-17	20
8/18	00°57'S	132°24'W	15	4	3	SE-17	00
8/19	02°42'S	131°42'W	14	4	3	W-12	30
8/20	04°20'S	131°50'W	14	4	3	SE-12	20
8/21	05°56'S	132°22'W	14	4	3	SE-14	30
8/22	07°26'S	132°16'W	15	3	4	SE-16	30
8/23	09°20'S	132°16'W	15	3	3	E-12	40
8/24	10°45'S	132°04'W	15.5	3	2	E-13	20
8/25	12°07'S	132°10'W	13.5	3	2	E-15	40
8/26	13°26'S	132°16'W	15	2	2	E-13	20
8/27	12°16'S	133°18'W	14	3	3	SE-17	20
8/28	11°23'S	134°32'W	14	3	3	SE-16	20
8/29	10°31'S	135°46'W	13	3	3	SE-18	20
8/30	09°32'S	136°55'W	14	3	4	SE-17	30
8/31	08°42'S	137°59'W	13	3	4	E-18	10
9/1	07°30'S	138°57'W	14	2	2	E-10	80
9/2	08°48'S	139°10'W	12	2	3	E-19	60
9/3	10°25'S	139°40'W	14.5	3	3	E-18	60
9/4	09°08'S	140°10'W	10	5	3	E-17	30
9/8	07°47'S	140°02'W	13	4	3	SE-14	10
9/10	09°08'S	139°04'W	14	3	3	E-16	20
9/11	10°05'S	138°38'W	13	3	4	E-16	20
9/12	10°14'S	138°56'W	15	3	2	NE-11	10
9/13	09°44'S	139°34'W	14	3	2	E-2	10
9/14	09°08'S	140°04'W	13	4	3	E-17	10

[1/] Sea state coded according to Oceanographic Log Sheet B, PRNC-NHO-1189 (Rev. 2-56).

[2/] Wind speed in knots.

Table 6.--Common and scientific names of fish taken on EQUAPAC

Yellowfin tuna	Neothunnus macropterus (Temminck and Schlegel)
Bigeye tuna	Parathunnus sibi (Temminck and Schlegel)
Albacore	Germo alalunga (Bonnaterre)
Skipjack	Katsuwonus pelamis (Linnaeus)
Little tunny	Euthynnus yaito Kishinouye
Dogtooth tuna	Gymnosarda nuda (Günther)
Dolphin	Coryphaena hippurus Linnaeus
Broadbill swordfish	Xiphias gladius Linnaeus
Shortnosed spearfish	Tetrapturus angustirostris Tanaka
White marlin	Istiompax marlina (Jordan and Hill)
Black marlin	Makaira ampla (Poey)
Striped marlin	Makaira mitsukurii (Jordan and Snyder)
Wahoo	Acanthocybium solandri (Cuvier and Valenciennes)
Whitetip shark	Pterolamiops longimanus (Poey)
Silky shark	Eulamia floridanus (Bigelow, Schroeder, and Springer)
Great blue shark	Prionace glauca (Linnaeus)
Bigeye thresher shark	Alopias superciliosus (Lowe)
Bonito shark	Isurus glaucus Müller and Henle
Hammerhead shark	Sphyrna lewini (Griffith)
Truncated sunfish	Ranzania laevis (Gmelin)
Lancet fish	Alepisaurus sp.
Puffer	Lagocephalus lagocephalus (Linnaeus)
Marquesan sardine	Harengula vittata (Cuvier and Valenciennes)
Goatfish	Upeneus parvus Poey
Red snapper	Lutjanus bohar (Forskål)
Green snapper	Aprion virescens Cuvier and Valenciennes
Jack	Caranx ignobilis (Forskål)
Jack	Caranx lugubris Poey
Jack	Caranx melampygus Cuvier and Valenciennes
Barracuda	Sphyraena nigripinnis Temminck and Schlegel

Table 7.--Surface troll catch and related data, Hugh M. Smith cruise 35

Date, 1956	Time, ZT	Position		Species	Number [1/]	Average length, cm.	Surface temp., °F.	Vessel speed, kt.
		Latitude	Longitude					
8/8	1500	18°56'N	155°08'W	Dolphin	1	72	78.5	9
8/9	1105	18°24'N	152°27'W	Dolphin	1	68	77.2	9
8/12	0620	15°13'N	143°49'W	Wahoo	1	154	78.2	9
9/3	0945	01°44'N	143°01'W	Dolphin	2	91	80.2	9
9/22	0700	13°36'S	159°56'W	Skipjack	1	64	80.6	9
10/1	1755	10°09'N	160°02'W	Dolphin	1	90	81.0	9

[1/] Fish caught within a 1-hour interval were combined in a single number.

Table 8.--Surface troll catch, Charles H. Gilbert cruise 30

Date, 1956	Morning position		Evening position		Hours trolled	Catch			Miscellaneous
	Latitude	Longitude	Latitude	Longitude		Yellow-fin	Little tunny	Dogtooth tuna	
9/7	09°00'S	140°05'W	07°58'S	140°40'W	11	1	1	-	-
9/8	07°58'S	140°40'W	08°31'S	139°48'W	11	1	1	-	2 red snappers, 1 jack, 3 green snappers
9/10	08°50'S	139°42'W	09°46'S	138°52'W	11	2	-	3	2 red snappers, 1 green snapper, 4 jack, 1 barracuda
9/11	09°46'S	138°52'W	10°30'S	138°40'W	11	2	-	-	2 wahoo, 1 jack
9/12	10°30'S	138°40'W	09°48'S	139°02'W	8.5	-	-	-	-
9/13	09°48'S	139°02'W	09°20'S	140°04'W	8	2	-	-	2 wahoo, 1 dolphin
9/14	09°20'S	140°04'W	08°56'S	140°05'W	3.5	1	-	-	-
9/17	08°56'S	140°05'W	07°58'S	141°11'W	11.5	1	1	1	1 wahoo, 1 dolphin, 3 green snappers
Total					75.5	10	3	4	

Table 9.--Record of sightings each day of bird flocks and scattered birds, Hugh M. Smith cruise 35

Date, 1956	Noon position		Bird flocks											Scattered birds							
				Size			Composition														
	Latitude	Longitude	Total number	<10	10 - 50	> 50	Terns	Boobies	Bo'sun birds	Frigate birds	Petrels or shearwaters	Others		Albatross	Petrels or shearwaters	Boobies	Terns	Frigate birds	Bo'sun birds	Storm petrels	Others
8/8	18°53'N	155°42'W	7	1	2	4	X	-	-	-	X	-		-	23	-	64	3	-	-	-
8/9	18°21'N	152°18'W	1	-	1	-	X	-	-	-	X	-		-	20	-	11	-	-	-	-
8/10	16°58'N	149°08'W	-	-	-	-	-	-	-	-	-	-		-	6	-	-	-	1	2	-
8/11	16°24'N	145°37'W	-	-	-	-	-	-	-	-	-	-		-	9	-	4	1	1	-	-
8/12	14°48'N	143°04'W	3	-	3	-	X	-	-	-	X	-		-	26	-	8	-	6	-	-
8/13	13°54'N	139°53'W	3	1	1	1	X	-	X	-	X	-		-	13	-	1	-	-	-	-
8/14	12°56'N	136°58'W	1	-	1	-	X	-	-	-	X	-		-	40	-	4	-	1	9	2
8/15	10°28'N	134°59'W	-	-	-	-	-	-	-	-	-	-		-	19	-	-	-	-	1	-
8/16	07°20'N	134°36'W	1	-	-	1	X	-	-	-	X	-		-	13	-	-	-	1	2	-
8/17	04°38'N	134°47'W	2	-	2	-	X	-	-	-	X	-		-	23	-	4	-	2	-	-
8/18	02°20'N	135°14'W	-	-	-	-	-	-	-	-	-	-		-	12	-	-	-	-	-	-
8/19	00°09'S	134°52'W	-	-	-	-	-	-	-	-	-	-		-	1	-	-	-	-	-	-
8/20	03°21'S	134°54'W	2	1	1	-	X	-	-	-	X	-		-	26	-	5	-	2	2	-
8/21	06°42'S	135°01'W	1	-	1	-	X	-	-	-	X	-		-	13	-	3	2	3	-	-
8/22	09°57'S	135°00'W	-	-	-	-	-	-	-	-	-	-		-	-	-	-	1	-	1	-
8/23	12°58'S	134°58'W	-	-	-	-	-	-	-	-	-	-		-	2	-	-	-	-	-	-
8/24	16°09'S	134°58'W	1	-	-	1	X	-	-	X	X	-		-	-	-	-	-	2	-	1
8/25	19°02'S	135°07'W	-	-	-	-	-	-	-	-	-	-		-	-	-	1	-	-	-	-
8/26	18°59'S	138°59'W	-	-	-	-	-	-	-	-	-	-		-	2	-	-	1	1	-	-
8/27	18°56'S	141°49'W	-	-	-	-	-	-	-	-	-	-		-	4	-	1	-	4	-	-
8/28	16°45'S	142°37'W	7	2	4	1	X	X	-	X	X	-		-	22	48	43	6	2	-	-
8/29	13°33'S	143°05'W	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
8/30	10°15'S	143°00'W	2	1	1	-	X	-	X	-	-	-		-	2	1	6	1	2	2	-
8/31	07°20'S	143°00'W	3	-	1	2	X	X	X	X	X	-		-	1	4	2	-	3	-	-
9/1	04°13'S	143°06'W	-	-	-	-	-	-	-	-	-	-		-	2	2	5	-	1	-	-
9/2	00°48'S	143°06'W	-	-	-	-	-	-	-	-	-	-		-	8	1	2	-	1	2	-
9/3	01°58'S	143°08'W	-	-	-	-	-	-	-	-	-	-		-	-	1	-	-	-	1	-
9/4	01°56'S	147°02'W	-	-	-	-	-	-	-	-	-	-		-	9	-	2	-	1	-	-
9/5	01°52'S	151°02'W	1	-	1	-	X	-	X	X	X	-		-	25	4	2	-	2	5	-
9/6	01°06'S	151°25'W	-	-	-	-	-	-	-	-	-	-		-	10	1	-	-	1	3	-
9/7	04°21'S	151°02'W	-	-	-	-	-	-	-	-	-	-		-	6	-	4	-	4	2	-
9/8	07°39'S	151°02'W	1	-	1	-	X	-	X	-	X	-		-	3	2	-	-	-	-	-
9/9	10°34'S	150°55'W	5	-	2	3	X	X	X	X	X	-		-	-	3	30	-	-	1	-
9/10	13°50'S	151°02'W	2	-	2	-	X	-	-	-	-	-		-	-	-	7	-	-	-	-
9/11	17°13'S	149°41'W	-	-	-	-	-	-	-	-	-	-		-	4	3	7	-	-	-	-
9/16	Moorea		-	-	-	-	-	-	-	-	-	-		-	13	5	13	-	3	1	-
9/19	15°35'S	152°02'W	3	-	1	2	X	X	-	-	X	-		-	24	-	1	-	-	-	-
9/20	14°29'S	154°52'W	-	-	-	-	-	-	-	-	-	-		-	1	5	1	-	1	-	-
9/21	14°31'S	158°11'W	1	-	-	1	X	X	-	-	-	-		-	6	12	3	-	-	-	1
9/22	13°02'S	159°57'W	1	-	1	-	X	X	X	-	X	-		-	8	8	-	4	-	3	-

X = number not recorded.

Table 9.--Record of sightings each day of bird flocks and scattered birds, Hugh M. Smith cruise 35 (cont'd)

Date, 1956	Noon position		Bird flocks											Scattered birds							
				Size			Composition														
	Latitude	Longitude	Total number	< 10	10 - 50	> 50	Terns	Boobies	Bo'sun birds	Frigate birds	Petrels or shearwaters	Others		Albatross	Petrels or shearwaters	Boobies	Terns	Frigate birds	Bo'sun birds	Storm petrels	Others
9/23	10°01'S	159°55'W	1	-	1	-	X	X	X	-	X	-		1	16	5	9	-	2	-	-
9/24	07°02'S	159°59'W	3	-	2	1	X	-	-	X	X	-		-	14	-	52	-	1	4	-
9/25	04°01'S	159°59'W	6	-	3	3	X	-	-	X	X	-		-	19	1	8	-	1	-	-
9/26	00°43'S	159°58'W	12	-	-	12	X	X	X	X	X	-		-	29	51	100	2	32	17	-
9/27	01°18'N	158°35'W	9	-	4	5	X	X	X	X	X	-		-	39	13	142	13	21	11	-
9/28	03°18'N	160°06'W	-	-	-	-	-	-	-	-	-	-		-	2090	625	1655	2	250	30	-
9/29	03°18'N	160°06'W	-	-	-	-	-	-	-	-	-	-		-	3	1	9	-	14	-	-
9/30	06°27'N	159°52'W	1	-	1	-	X	X	X	-	-	-		-	26	4	11	-	2	6	-
10/1	09°43'N	159°58'W	-	-	-	-	-	-	-	-	-	-		-	93	7	9	1	-	-	-
10/2	09°43'N	159°58'W	-	-	-	-	-	-	-	-	-	-		-	25	-	2	-	5	-	-
10/3	15°42'N	159°11'W	-	-	-	-	-	-	-	-	-	-		-	26	-	4	-	-	-	-
10/4	19°06'N	158°24'W	2	-	-	2	X	X	X	X	X	-		-	48	19	65	-	36	20	-

X = number not recorded.

Table 10.--Record of sightings each day of bird flocks and scattered birds, Charles H. Gilbert cruise 30

Date, 1956	Noon position		Bird flocks											Scattered birds							
				Size			Composition														
	Latitude	Longitude	Total number	< 10	10 - 50	> 50	Terns	Boobies	Bo'sun birds	Frigate birds	Petrels or shearwaters	Others		Albatross	Petrels or shearwaters	Boobies	Terns	Frigate birds	Bo'sun birds	Storm petrels	Others
8/7	20°07'N	156°11'W	-	-	-	-	-	-	-	-	-	-		-	48	-	66	-	3	-	-
8/8	17°47'N	153°50'W	-	-	-	-	-	-	-	-	-	-		1	8	-	4	-	3	-	-
8/9	16°04'N	150°44'W	1	-	1	-	X	-	-	-	X	-		-	9	-	-	-	-	-	-
8/10	14°07'N	147°57'W	-	-	-	-	-	-	-	-	-	-		-	17	-	7	-	-	-	-
8/11	11°48'N	145°39'W	-	-	-	-	-	-	-	-	-	-		-	29	1	4	-	-	-	-
8/12	09°25'N	143°06'W	2	1	1	-	-	-	-	-	X	-		-	17	-	-	-	-	4	-
8/13	07°39'N	139°59'W	1	-	-	1	-	-	-	-	X	-		-	51	-	2	-	-	4	-
8/14	04°39'N	137°19'W	-	-	-	-	-	-	-	-	-	-		-	43	1	1	-	-	-	-
8/15	02°42'N	134°58'W	-	-	-	-	-	-	-	-	-	-		-	31	-	-	-	-	-	-
8/16	01°32'N	134°04'W	-	-	-	-	-	-	-	-	-	-		-	4	-	-	-	1	-	-
9/7	08°34'S	140°23'W	13	-	5	8	X	X	-	X	X	-		-	-	-	15	-	-	-	-
9/8	07°47'S	140°02'W	-	-	1	2	X	X	-	X	-	-		-	-	28	10	12	-	-	-
9/10	09°08'S	139°04'W	13	-	9	4	X	X	-	X	-	-		-	-	-	-	-	-	-	-
9/11	10°05'S	138°38'W	11	-	6	5	X	X	-	X	-	-		-	-	-	-	-	-	-	-
9/12	10°14'S	138°56'W	5	-	-	5	X	X	-	X	X	-		-	-	4	60	-	-	-	-
9/13	09°44'S	139°34'W	12	1	6	5	X	X	-	X	-	-		-	-	6	14	-	-	-	-
9/14	09°07'S	140°04'W	2	-	-	2	X	X	-	-	X	-		-	-	-	15	-	-	-	-
9/17	08°43'S	140°44'W	9	-	3	6	-	-	-	-	-	-		-	-	-	8	-	-	-	-
9/18	05°28'S	142°32'W	-	-	-	-	-	-	-	-	-	-		-	7	3	11	1	-	-	-
9/19	02°01'S	144°39'W	-	-	-	-	-	-	-	-	-	-		-	47	1	13	-	1	-	-
9/20	01°19'N	146°25'W	1	-	-	1	X	-	-	X	X	-		-	35	2	1	-	-	2	-
9/21	04°54'N	148°41'W	2	-	-	2	X	-	-	X	X	-		-	16	5	-	1	3	2	-
9/22	08°30'N	150°19'W	-	-	-	-	-	-	-	-	-	-		-	53	-	2	-	2	1	-
9/23	11°33'N	152°18'W	2	-	1	1	X	-	-	X	X	-		-	113	1	3	-	3	-	-
9/24	14°49'N	154°14'W	-	-	-	-	-	-	-	-	-	-		-	114	2	-	-	-	13	-
9/25	18°19'N	155°55'W	5	-	4	1	X	-	X	X	X	-		-	54	-	25	4	9	5	-

X = number not recorded.

Table 11.--Record of aquatic mammals sighted, Hugh M. Smith cruise 35

Date, 1956	Time, ZT	Position		Observation [1/]	Number
		Latitude	Longitude		
8/7	1915	20°56'N	156°50'W	Porpoise	25
8/8	0855	19°34'N	156°08'W	Whale	20
8/8	0925	19°31'N	156°07'W	Porpoise	-
9/5	1725	00°56'N	151°10'W	Killer whale	50
9/6	0920	00°44'S	151°25'W	Whale	1

[1/] Whales were identified by their profiles using the key from "Materials for cooperative North Pacific observations by Japan, the United States, and Canada, April 1, 1955."

Table 12.--Record of aquatic mammals sighted, Charles H. Gilbert cruise 30

Date, 1956	Time, ZT	Position		Observation	Number
		Latitude	Longitude		
9/11	1215	10°06'S	138°38'W	Blackfish	15
9/14	1320	09°00'S	140°05'W	Porpoise	12
9/17	1715	08°06'S	141°07'W	Porpoise	6

Table 13.--Longline catch record in numbers of fish, Charles H. Gilbert cruise 30

Station	Catch							Miscellaneous [1/]
	Yellow-fin	Big-eye	Alba-core	Skip-jack	Black marlin	White marlin	Striped marlin	
1	20	-	-	-	-	-	-	1 wahoo, 2 dolphin, 2 WT sharks
2	3	-	-	-	-	-	-	2 silky sharks
4	-	-	-	-	-	1	-	2 WT sharks, 3 bonito sharks, 1 GB shark, 1 hammerhead
6	5	-	-	-	1	2	2	4 GB sharks, 5 WT sharks
8	-	5	-	1	-	-	-	4 WT sharks
10	5	7	-	-	-	-	-	1 broadbill, 3 shortnosed spearfish, 1 silky shark
12	1	2	-	3	-	-	-	2 shortnosed spearfish, 1 wahoo
14	1	5	-	2	-	-	1	-
16	2	3	-	-	-	-	-	1 shortnosed spearfish, 2 GB sharks, 1 dolphin
18	-	-	1	-	-	-	-	1 WT shark
20	1	-	2	-	-	-	-	2 GB sharks, 1 bonito shark, 1 sunfish, 1 lancetfish
22	-	-	1	-	-	-	-	1 GB shark, 1 dolphin
24	4	4	-	-	-	-	-	2 GB sharks, 1 WT shark, 1 sunfish
26	5	4	1	1	-	-	-	4 dolphin, 1 GB shark, 1 WT shark, 1 silky shark
28	1	-	-	-	1	-	1	1 shortnosed spearfish, 1 GB shark
30	1	1	-	-	-	-	-	1 dolphin, 2 GB sharks, 1 WT shark
31	1	5	-	2	-	-	2	2 WT sharks, 2 GB sharks
33	-	3	-	1	-	-	1	4 GB sharks, 2 silky sharks, 1 big-eyed thresher shark, 1 puffer
35	-	-	14	-	1	-	-	5 silky sharks, 7 WT sharks, 1 GB shark, 1 bonito shark
37	14	1	7	1	-	1	-	10 WT sharks, 7 silky sharks
Total	64	40	26	11	3	4	7	

[1/] WT = whitetip; GB = great blue

Table 14.--Longline station data and catch of tuna per 100 hooks fished, Charles H. Gilbert cruise 30

Station	Date, 1956	Noon position		Number of baskets	Number of hooks	Catch per 100 hooks			
		Latitude	Longitude			Yellowfin	Bigeye	Albacore	Skipjack
1	8/16	01°32'N	134°04'W	60	630	3.2	-	-	-
2	8/17	00°20'N	133°25'W	60	650	0.5	-	-	-
4	8/18	00°57'S	132°24'W	60	650	-	-	-	-
6	8/19	02°42'S	131°42'W	60	650	0.8	-	-	-
8	8/20	04°20'S	131°50'W	60	650	-	0.8	-	0.2
10	8/21	05°55'S	132°22'W	60	642	0.8	1.1	-	-
12	8/22	07°26'S	132°14'W	60	652	0.2	0.3	-	0.5
14	8/23	09°20'S	132°16'W	60	648	0.2	0.8	-	0.3
16	8/24	10°45'S	132°04'W	60	638	0.3	0.5	-	-
18	8/25	12°07'S	132°10'W	60	650	-	-	0.2	-
20	8/26	13°26'S	132°16'W	60	639	0.2	-	0.3	-
22	8/27	12°16'S	133°20'W	60	647	-	-	0.2	-
24	8/28	11°23'S	134°32'W	60	639	0.6	0.6	-	-
26	8/29	10°31'S	135°46'W	60	645	0.8	0.6	0.2	0.2
28	8/30	09°32'S	136°55'W	60	636	0.2	-	-	-
30	8/31	08°42'S	137°59'W	60	649	0.2	0.2	-	-
31	9/1	07°30'S	138°57'W	60	629	0.2	0.8	-	0.3
33	9/2	08°48'S	139°10'W	60	640	-	0.5	-	0.2
35	9/3	10°25'S	139°40'W	60	635	-	-	2.2	-
37	9/4	09°08'S	140°10'W	60	629	2.2	0.2	1.1	0.2

Table 15.--Summary of results of pole-and-line fishing in the Marquesas Islands, Charles H. Gilbert cruise 30

Date, 1956	Locality	No. of hours fishing and scouting	No. of fish schools seen	No. of fish schools chummed	No. of tuna schools fished	Actual time spent fishing, minutes	No. of tuna caught	Estimated total weight of tuna caught, lbs.
9/7	Nuku Hiva to Eiao	11	8	4 [1/]	0	0	0	0
9/8	Eiao to Typee(Nuku Hiva)	11	3	1	0	0	0	0
9/10	Nuku Hiva to Hiva Oa via Ua Huka	11	1	1	0	0	0	0
9/11	Hiva Oa to Fatu Hiva via Motane	11	2	1	1	35	1	16
9/12	Fatu Hiva to Hiva Oa	8.5	2	2	1	28	344	1,720
9/13	Hiva Oa to Hua Pou	8	1	1	0	0	0	0
9/14	Hua Pou to Nuku Hiva	3.5	0	0	0	0	0	0
Total		64.0	17	10	2	63	345	1,736

[1/] Bait was chummed on another instance when two yellowfin hit the trolling lines.

Table 16.--Summary of fishing for bait in the Marquesas Islands, Charles H. Gilbert cruise 30

Station	Date, 1956	Locality	Number of sets		Catch of Marquesan sardine, buckets [1/]	
			Surround net	Lampara	Surround net	Lampara
38	9/6	Taiohae Bay, Nuku Hiva	9	-	56	-
40	9/9	Hanga Haa, Taipi Vai, Nuku Hiva	-	3	3	19
41	9/9	Houmi, Taipi Vai, Nuku Hiva	1	-	20	-
47	9/13	Taa Huku, Hiva Oa	1	-	0 [2/]	-
48	9/14	Haka Nai (Aneo Bay), Hua Pou	2	-	0	-
49	9/14	Taiohae Bay, Nuku Hiva	1	-	72	-
50	9/16	Taiohae Bay, Nuku Hiva	5	-	72	-
Total			19	3	220	19

[1/] Most of the catches included small numbers of various reef fishes.

[2/] Eight buckets of goatfish were caught at this station.

NOTES ON TABULATED OCEANOGRAPHIC DATA, HMS-35

Where more than one cast was made on a station, they are separated by a horizontal line. The cast number is indicated by a Roman numeral in the margin.

Where the corrected paired protected thermometer readings differed by more than 0.05°C. below 300 m. or more than 0.10°C. above 300 m., both temperature values are tabulated and the depth and salinity are repeated. Delta-t calculated using each temperature value is carried.

Weather is recorded in ww (present weather) code given in the U. S. Weather Bureau Circular M, Eighth Edition, Manual of Marine Meteorological Observations. Cloud coverage is in tenths of sky.

Wind velocity was measured with an anemometer 30 meters above the sea surface. The direction (given to the nearest 10°) is that from which the wind was blowing, measured through 360° from north.

Explanatory Code for Tabulated Data

Q - the value is questionable, but was used in construction of the station curve.

P - the value is poor, and while carried was not used in drawing the station curve.

NG - the value or line is in error and is discarded.

NG(C) - phosphate values in error due to contamination.

NS - this water sample was lost.

PT - Nansen bottle pretripped and data are unusable.

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35

Station 46 (O-1): 19°00'N., 154°30'W., August 9, 1956. Messenger time: first cast 0605 GCT, second cast 0625 GCT. Weather: 02, cloud coverage 4. Wind: 060°, 10 kt. Sea: < 1 ft. Wire angle: first cast 20°, second cast 25°. BT slide: 47. Dry bulb: 78.0°F. Wet bulb: 73.2°F. Barometric pressure: 1014 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	0	26.12	34.63	512.6	4.58	NG(C)
	23	25.74	34.69	497.0	4.66	-
I	56	24.76	34.76	463.1	4.73	-
	117	21.39	35.14	343.1	4.79	-
	170	19.67	35.05	305.8	4.28 P	-
II	192	18.40	34.88	287.3	4.54	-
	287	11.40	34.23	190.1	2.91	-
	388	8.78	34.27	144.5	1.82	-
	NG	6.63	NG	-	-	-
	585	6.36	34.31	108.3	0.73	-
	780	4.96	34.43	82.8	0.65	-
	977	4.26	34.49	71.2	0.88	-
	1179	3.69	34.56	60.4	1.19	-

Station 47 (O-2): 18°07'N., 151°52'W., August 10, 1956. Messenger time: 0130 GCT. Weather: 03, cloud coverage 8. Wind: 080°, 16 kt. Sea: 3-5 ft. Wire angle: 25°. BT slide: 54. Dry bulb: 78.8°F. Wet bulb: 73.3°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.76	34.79	490.2	4.74	NG(C)
62	25.58	34.78	485.8	4.66	-
86	25.50	34.78	483.3	4.65	-
119	22.19	34.78	390.1	4.85	-
182	18.49	34.87	290.0	4.41	-
211	16.50	34.63	261.7	4.32	-
317	10.63	34.29	172.4	2.37	-
429	8.43	34.38	131.3	1.02	-
501	7.53	34.36	119.9	0.64	-
644	6.23	34.42	98.4	0.50	-
856	4.86	34.47	78.8	0.71	-
1071	4.11	34.54	66.0	0.95	-
1274	3.51	34.54	60.4	1.22	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 48 (O-3): 16°49'N., 148°41'W., August 11, 1956. Messenger time: 0130 GCT. Weather: 15, cloud coverage 5. Wind: 040°, 15 kt. Sea: 5-8 ft. Wire angle: 35°. BT slide: 63. Dry bulb: 77.0°F. Wet bulb: 73.7°F. Barometric pressure: 1016 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.84	34.65	473.6	4.83	NG(C)
34	24.74	34.65	470.6	4.78	-
90	24.22	34.61	458.6	4.76	-
111	21.50	34.88	364.9	4.81	-
137	20.82	NG	333.5	4.75	-
190	15.89	34.51	257.2	3.75	-
289	10.13	34.22	169.2	3.08	-
396	8.16	34.31	132.4	1.32	-
493	7.51	34.43	114.4	0.72	-
602	6.68	34.47	100.3	0.69	-
806	5.45	34.47	85.5	0.85	-
1012	4.46	34.51	71.7	-	-
1213	3.86	34.58	60.6	1.13	-

Station 49 (O-4): 16°11'N., 145°34'W., August 12, 1956. Messenger time: 0133 GCT. Weather: 16, cloud coverage 5. Wind: 050°, 23 kt. Sea: 8-12 ft. Wire angle: 30°. BT slide: 72. Dry bulb: 75.3°F. Wet bulb: 72.0°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.13	34.79	471.7	4.76	NG(C)
31	25.02	34.81	467.2	4.73	-
114	21.66	34.61	388.5	4.89	-
136	19.33	34.52	336.0	4.44	-
163	17.34	34.42	296.0	4.05	-
213	12.48	34.23	209.2	2.34	-
324	9.62	34.45	144.2	0.87	-
434	7.90	34.43	119.8	0.46	-
549	6.83	34.45	103.8	0.34	-
660	6.08	34.47	92.8	0.42	-
887	5.04	34.52	77.1	0.52	-
1107	4.22	34.49	70.7	0.83	-
1321	3.62	34.54	61.2	1.08	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 50 (O-5): 14°39'N., 142°42'W., August 13, 1956. Messenger time: 0030 GCT. Weather: 15, cloud coverage 7. Wind: 020°, 18 kt. Sea: 8-12 ft. Wire angle: 40°. BT slide: 81. Dry bulb: 77.5°F. Wet bulb: 74.8°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.73	34.88	482.6	4.69	NG(C)
8	25.72	34.90	481.3	4.66	-
29	25.51	34.90	475.0	4.71	-
36	23.75	34.83	429.4	4.83	-
91	20.65	34.76	351.6	5.03	-
176	14.42	34.20	249.3	3.26	-
264	10.52	34.56	150.6	0.68	-
348	9.33	34.56	131.6	0.37	-
438	8.39	34.56	117.2	0.32	-
522	7.59	34.52	108.8	0.26	-
698	6.18	34.54	88.9	-	-
869	5.10	34.54	76.2	0.47	-
1033	4.38	34.56	67.2	0.76	-

Station 51 (O-6): 13°46'N., 139°27'W., August 14, 1956. Messenger time: 0035 GCT. Weather: 16, cloud coverage 4. Wind: 090°, 14 kt. Sea: 1-3 ft. Wire angle: 05°. BT slide: 90. Dry bulb: 79.9°F. Wet bulb: 76.5°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.56	34.83	511.3	4.62	NG(C)
29	26.34	34.81	506.0	4.61	-
59	24.35	34.88	442.8	4.81	-
108	20.02	34.60	347.1	4.52	-
137	15.62	34.34	263.8	4.12	-
235	11.02	34.61	155.3	0.44	-
353	9.15	34.61	124.9	0.24	-
468	7.90	34.58	108.7	0.29	-
586	-	34.52	-	0.39	-
700	5.88	34.52	86.8	0.47	-
933	4.80	34.58	70.0	0.58	-
1157	3.96	34.58	61.4	0.92	-
1180	-	-	-	-	-
1372	3.38	34.61	53.8	1.28	-
1407	-	-	-	-	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 52 (O-7): 12°00'N., 135°00'W., August 14, 1956. Messenger time: 1125 GCT. Weather: 02, cloud coverage not recorded. Wind: 110°, 10 kt. Sea: 1-3 ft. Wire angle: 02°. BT slide: 102. Dry bulb: 80.0°F. Wet bulb: 75.6°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.38	34.65	518.8	4.71	0.14
20	26.34	34.69	514.8	4.63	Trace
40	23.97	34.83	435.7	4.90	0.27
80	15.56	34.38	259.6	1.58	1.26
91	14.27	34.36	234.3	1.54	1.79
91	14.40	34.36	237.0	-	-
159	11.67	34.79	153.5	0.09	2.02
244	10.57	34.74	138.1	0.31	2.39
327	9.62	34.69	126.3	0.13	2.45
414	-	34.65	-	0.15	2.57
498	7.77	34.60	105.4	0.18	2.75
674	6.36	34.54	91.1	0.19	3.28
674	6.41	34.54	91.8	0.19	-
846	5.39	34.56	78.0	0.35	3.17
1014	4.64	34.56	69.9	0.55	3.20

Station 53 (O-8): 09°59'N., 134°56'W., August 15, 1956. Messenger time: 0013 GCT. Weather: 15, cloud coverage 7. Wind: 070°, 14 kt. Sea: 1-3 ft. Wire angle: 30°. BT slide: 107. Dry bulb: 77.1°F. Wet bulb: 75.0°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	27.11	34.18	574.7	4.55	0.71
19	26.96	34.23	566.4	4.57	0.62
37	26.24	34.45	529.0	4.64	0.40
93	12.11	34.70	168.0	0.14	2.92
204	10.44	34.70	139.0	0.23	2.96
307	9.64	34.70	126.0	0.29	2.51
415	8.82	34.65	117.0	0.18	3.11
519	7.70	34.60	104.5	0.26	3.23
623	6.79	34.58	93.5	0.29	3.54
831	5.47	34.54	80.4	0.53	3.53

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 53 (O-8) Deep: 09°59'N., 134°56'W., August 15, 1956. Messenger time: 0118 GCT. Weather: 15, cloud coverage 7. Wind: 070°, 14 kt. Sea: 1-3 ft. Wire angle: 37°. BT slide: 107. Dry bulb: 77.1°F. Wet bulb: 75.0°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
512	7.71	34.58	106.2	0.22	2.04 P
710	6.28	34.54	90.1	0.30	2.42 P
908	5.26	34.56	76.6	0.63	3.43
1496	3.40	34.60	54.8	1.46	3.64
1894	2.50	34.61	46.3	1.91	3.30
2365	2.04	34.63	41.1	2.17	2.02
2840	1.84	34.65	38.1	2.32	3.25
2840	-	-	-	-	3.30

Station 55 (O-9): 07°58'N., 134°39'W., August 16, 1956. Messenger time: 1725 GCT. Weather: 15, cloud coverage 6. Wind: 090°, 10 kt. Sea: < 1 ft. Wire angle: 25°. BT slide: 112. Dry bulb: 82.3°F. Wet bulb: 76.9°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	27.24	33.95	595.3	4.56	0.45
24	27.16	34.00	588.7	4.59	0.37
68	25.70	34.76	490.7	4.21	0.65
101	14.60	34.45	234.4	2.29	1.14
136	11.82	34.67	164.9	0.50	2.59
234	10.16	34.72	132.7	1.08	2.35
352	9.35	34.69	122.1	0.50	2.73
465	8.68	34.65	114.9	0.40	3.08
559	7.77	34.61	104.6	0.28	3.33
696	6.42	34.56	90.5	0.43	3.38
928	5.16	34.58	74.1	0.97	3.03
1153	4.29	34.56	66.2	0.98	3.08
1365	3.63	34.60	56.8	1.32	3.36

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 57 (O-10): 06°09'N., 134°41'W., August 17, 1956. Messenger time: 0807 GCT. Weather: 80, cloud coverage 8. Wind: 160°, 16 kt. Sea: 3-5 ft. Wire angle: 15°. BT slide: 117. Dry bulb: 79.5°F. Wet bulb: 75.0°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.89	34.83	521.1	4.52	0.54
29	26.90	34.85	520.0	4.53	0.42
64	26.80	34.85	516.9	4.45	0.45
113	23.98	34.92	429.4	3.46	0.25
167	13.08	34.65	189.8	1.27	2.01
216	10.54	34.70	140.7	1.11	2.40
325	9.45	34.69	123.7	1.70	2.08
438	8.84	34.67	115.7	0.88	2.65
546	8.12	34.65	106.6	0.71	2.76
655	7.26	34.60	98.2	0.76	2.88
867	5.52	34.56	79.7	0.90	2.94
1080	4.58	34.56	69.2	1.27	2.83
1284	3.94	34.58	61.3	1.51	2.94

Station 58 (O-11): 04°11'N., 135°05'W., August 18, 1956. Messenger time: first cast 0201 GCT, second cast 0308 GCT. Weather: 01, cloud coverage 2. Wind: 120°, 17 kt. Sea: 3-5 ft. Wire angle: first cast 35°, second cast 40°. BT slide: 124. Dry bulb: 77.9°F. Wet bulb: 72.5°F. Barometric pressure: 1012 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	0	25.12	35.01	455.6	4.80	0.54
	24	24.99	34.99	453.4	4.47	0.42
	45	24.95	34.99	452.3	4.47	0.42
	65	24.90	35.05	446.3	3.74	0.24
	82	24.84	35.03	446.1	4.44	NS
I	124	24.35	35.10	427.0	4.13	0.45
	204	10.28	34.76	131.7	1.74	1.61
	479	9.38	34.69	122.5	1.40	2.16
II	595	8.04	34.65	105.4	0.55	2.78
	718	6.91	34.58	95.1	0.89	2.69
	925	5.28	34.56	76.8	1.30	2.69
	1165	4.16	34.60	61.9	1.60	2.38
	PT	-	-	-	-	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 60 (O-12): 01°59'N., 135°12'W., August 19, 1956. Messenger time: 0045 GCT. Weather: 01, cloud coverage 6. Wind: 080°, 18 kt. Sea: 1-3 ft. Wire angle: 40°. BT slide: 130. Dry bulb: 78.4°F. Wet bulb: 74.0°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.44	34.88	445.5	4.53	0.71
55	24.76	35.07	441.0	4.44	0.76
109	22.92	35.07	389.0	3.79	0.93
160	14.69	34.94	200.5	1.49	1.91
193	13.22	34.99	167.5	1.38	2.14
251	12.60	34.94	159.4	0.98	2.14
368	11.18	34.83	142.0	0.81	2.34
484	9.36	34.72	120.0	1.09	2.55
567	8.14	34.65	106.9	0.51	2.93
694	6.50	34.56	91.4	1.46	2.91
860	5.51	34.58	78.0	1.76	2.18
1022	4.54	34.58	67.4	1.72	1.59
1221	3.82	34.60	58.7	1.77	2.98

Station 62 (O-13): 00°04'S., 134°54'W., August 19, 1956. Messenger time: 1849 GCT. Weather: 01, cloud coverage 2. Wind: 100°, 20 kt. Sea: 3-5 ft. Wire angle: 35°. BT slide: 137. Dry bulb: 79.6°F. Wet bulb: 73.6°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.38	35.05	431.4	4.44	0.85
38	24.10	35.14	416.9	4.27	0.79
109	17.35	35.32 P	230.8	3.00	1.21
145	13.82	35.08	172.7	2.88	0.90 P
217	12.30	34.96	152.3	2.65	1.79
240	11.86	34.88	150.2	2.15	1.13 P
352	11.44	34.88	143.0	1.03	2.26
459	8.85	34.72	112.1	0.82	2.86 P
530	8.44	34.69	108.5	0.84	1.96
640	7.33	34.65	95.6	1.18	2.52
889	5.52	34.60	76.7	1.79	2.84
1170	4.20	34.61	61.5	1.92	3.13
1465	3.54	34.63	53.8	2.08	2.95

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 62 (O-13) Deep: 00°10'S., 134°50'W., August 19, 1956. Messenger time: first cast 2127 GCT, second cast 2237 GCT. Weather: 01, cloud coverage 2. Wind: 080°, 18 kt. Sea: 5-8 ft. Wire angle: first cast 32°, second cast 25°. BT slide: 137. Dry bulb: 79.6°F. Wet bulb: 73.6°F. Barometric pressure: 1015 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
I	437	8.13	34.70	103.0	0.82	2.86
II	2061	2.32	34.69	38.8	2.23	2.92
	2514	1.89	34.69	35.3	2.60	2.10
	2720	1.87	34.70	34.3	2.78	2.78
	2720	-	-	-	-	2.80

Station 64 (O-14): 02°14'S., 134°52'W., August 20, 1956. Messenger time: 1338 GCT. Weather: 01, cloud coverage 1. Wind: 100°, 20 kt. Sea: 5-8 ft. Wire angle: 15°. BT slide: 142. Dry bulb: 76.2°F. Wet bulb: 71.8°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.92	35.44	419.0	4.62	NG(C)
66	24.95	35.43	420.6	4.62	-
137	13.24	34.94	171.6	0.83	-
158	12.78	34.90	165.8	0.76	-
223	11.94	34.87	152.3	1.08	-
311	11.24	34.81	144.5	0.89	-
459	9.60	34.72	123.8	1.22	-
601	7.37	34.61	99.0	1.29	-
764	6.10	34.60	83.4	1.94	-
912	5.24	34.56	76.4	1.98	-
1221	4.00	34.60	60.3	1.97	-
1364	3.48	34.61	54.6	2.15	-
1809	2.53	34.67	42.0	2.29	-

Table 17.--Observed oceanograhic station data, Hugh M. Smith cruise 35 (cont'd)

Station 65 (O-15): 04°01'S., 134°58'W., August 21, 1956. Messenger time: 0126 GCT. Weather: 01, cloud coverage 1. Wind: 120°, 12 kt. Sea: 3-5 ft. Wire angle: 25°. BT slide: 147. Dry bulb: 77.4°F. Wet bulb: 73.8°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.32	35.55	422.7	4.63	0.85
50	25.11	35.55	416.6	4.68	0.79
98	24.88	35.59	406.9	4.59	0.84
128	15.16	35.08	200.0	1.40	1.87
167	13.03	34.97	165.5	0.78	2.46
270	12.16	34.92	152.6	0.59	2.37
334	11.72	34.88	147.8	0.47	2.56
452	9.84	34.78	123.3	0.26	2.88
531	8.43	34.70	107.5	0.41	3.08
660	6.95	34.60	94.2	1.14	3.04
888	5.56	34.54	81.6	1.63	2.71
1122	4.58	34.54	70.7	1.94	2.56
1351	3.73	34.58	59.3	2.34	3.06

Station 67 (O-16): 05°33'S., 135°02'W., August 21, 1956. Messenger time: 1306 GCT. Weather: 02, cloud coverage 2. Wind: 110°, 10 kt. Sea: 1-3 ft. Wire angle: 32°. BT slide: 150. Dry bulb: 77.2°F. Wet bulb: 73.0°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.40	35.43	433.7	4.70	0.85
43	25.42	35.44	433.6	4.65	0.93
88	25.40	35.46	431.5	4.62	0.70
113	24.86	35.46	415.8	4.42	0.63
138	21.19	35.50	312.0	3.98	1.28
230	12.30	34.96	152.3	0.22	2.52
284	11.21	34.85	141.0	0.50	2.53
385	9.88	34.79	123.1	0.83	2.82
453	9.10	34.72	115.9	1.11	2.91
563	7.96	34.65	104.2	1.65	2.89
563	8.04	34.65	105.4	-	-
760	6.26	34.61	84.6	0.95	2.50
962	4.86	34.56	72.2	1.71	2.74
1167	4.18	34.56	65.1	2.20	3.21

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 69 (O-17): 06°59'S., 135°02'W., August 21, 1956. Messenger time: 2311 GCT. Weather: 01, cloud coverage 1. Wind: 120°, 13 kt. Sea: < 1 ft. Wire angle: 28°. BT slide: 155. Dry bulb: 78.0°F. Wet bulb: 73.5°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.59	35.41	440.6	4.86	NG(C)
61	25.41	35.48	430.5	4.68	-
116	25.24	35.50	423.9	4.65	-
134	24.90	35.48	415.4	4.29	-
163	19.39	35.55	262.6	3.82	-
237	12.18	34.90	154.5	0.73	-
293	11.04	34.83	139.5	0.63	-
397	9.70	34.74	124.0	1.99	-
467	8.74	34.69	112.8	1.57	-
501	7.82	NG	89.1	2.09	-
662	6.58	34.60	89.5	2.08	-
662	6.63	34.60	90.1	-	-
834	5.56	34.58	78.6	1.24	-
1022	4.67	34.54	71.6	2.12	-

Station 71 (O-18): 08°28'S., 135°04'W., August 22, 1956. Messenger time: 1025 GCT. Weather: 02, cloud coverage 2. Wind: 100°, 18 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 159. Dry bulb: 76.5°F. Wet bulb: 72.8°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.46	35.35	441.3	4.74	0.90
50	25.48	35.35	441.6	4.72	0.97
101	25.46	35.35	441.3	4.69	0.95
152	22.34	35.99	307.0	4.32	0.98
172	20.82	35.84	278.0	4.15	0.98
277	11.98	34.79	158.9	1.05	2.40
343	10.12	34.74	130.5	1.38	2.39
464	8.45	34.63	113.0	2.17	2.60
544	7.60	34.60	103.0	2.13	2.79
675	6.62	34.56	93.0	2.18	2.84
907	5.22	34.52	79.2	2.19	2.67
1144	4.22	34.56	65.7	2.27	2.70
1381	3.53	34.58	57.5	2.45	2.95

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 73 (O-19): 09°54'S., 135°01'W., August 22, 1956. Messenger time: 2101 GCT. Weather: 01, cloud coverage 3. Wind: 070°, 20 kt. Sea: 5-8 ft. Wire angle: 35°. BT slide: 163. Dry bulb: 79.8°F. Wet bulb: 75.2°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.36	35.57	422.4	4.96	0.99
40	25.32	35.59	419.9	4.87	1.14
88	25.34	35.59	420.5	4.80	1.08
129	22.55	36.08	306.1	4.31	0.80
169	20.80	35.88	274.5	4.26	0.87
262	13.71	34.85	187.5	2.63	1.67
355	10.39	34.78	132.1	0.94	2.66
427	9.28	34.70	120.2	1.14	2.93
554	7.98	34.61	107.5	1.23	3.36
760	5.74	34.54	83.7	1.29	3.63

Station 73 (O-19) Deep: 09°57'S., 135°00'W., August 22, 1956. Messenger time: first cast 2205 GCT, second cast 2311 GCT. Weather: 01, cloud coverage 3. Wind: 090°, 18 kt. Sea: 5-8 ft. Wire angle: first cast 25°, second cast 20°. BT slide: 163. Dry bulb: 79.8°F. Wet bulb: 75.2°F. Barometric pressure: 1014 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	666	6.62	34.56	93.0	0.99	2.39 P
I	888	5.00	34.52	76.6	1.63	2.26 P
	1116	4.19	34.54	66.6	2.19	3.16
	1626	2.90	34.61	49.6	2.40	2.98
II	2242	2.08	34.65	39.8	2.70	2.80
	2897	1.80	34.69	34.7	3.20	1.50
	3492	1.59	34.69	33.2	3.58	2.77

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 75 (O-20): 11°37'S., 135°05'W., August 23, 1956. Messenger time: 1147 GCT. Weather: 03, cloud coverage 4. Wind: 080°, 16 kt. Sea: 1-3 ft. Wire angle: 13°. BT slide: 167. Dry bulb: 76.3°F. Wet bulb: 72.3°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.34	35.71	411.9	4.68	0.90
72	25.34	35.86	401.0	4.71	0.88
123	23.61	36.35	315.7	4.49	0.95
154	22.86	36.36	294.1	4.23	0.51
201	22.04	36.20	283.8	4.31	0.79
226	20.61	35.91	267.4	4.23	0.70
350	10.72	34.61	150.2	2.46	2.26
475	7.98	34.61	107.4	2.36	2.65
557	7.16	34.58	98.7	2.00	2.97
691	6.06	34.54	87.3	2.17	2.97
929	4.96	34.52	76.1	2.27	3.17
1171	4.02	34.54	65.1	2.34	2.75
1413	3.28	34.60	53.7	2.60	3.06

Station 77 (O-21): 12°58'S., 134°58'W., August 23, 1956. Messenger time: 2125 GCT. Weather: 02, cloud coverage 2. Wind: 100, 18 kt. Sea: 1-3 ft. Wire angle: 14°. BT slide: 171. Dry bulb: 77.0°F. Wet bulb: 72.2°F. Barometric pressure: 1016 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.22	35.75	405.5	4.78	1.02
57	25.14	35.75	403.1	4.76	0.82
99	24.86	36.11	368.7	4.67	0.98
130	23.70	36.18	330.5	4.50	0.76
151	22.87	36.33	296.8	4.48	0.98
218	20.80	35.97	268.0	4.40	0.82
321	12.16	34.69	169.5	2.48	1.04
431	8.68	34.60	118.7	1.78	2.60
540	6.96	34.56	97.2	2.71	2.53
644	6.22	34.54	89.5	2.52	2.76
862	5.18	34.52	78.8	2.15	1.78
1076	4.30	34.54	67.8	2.42	1.65
1289	3.62	34.60	56.7	2.55	2.94

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 79 (O-22): 14°26'S., 135°00'W., August 24, 1956. Messenger time: 0758 GCT. Weather: 03, cloud coverage 3. Wind: 070°, 10 kt. Sea: < 1 ft. Wire angle: 18°. BT slide: 175. Dry bulb: 76.0°F. Wet bulb: 71.8°F. Barometric pressure: 1016 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.87	36.18	364.2	4.88	0.63
63	24.87	36.22	361.2	4.68	0.58
152	23.33	36.38	306.3	4.20	0.45
163	23.11	36.38	299.9	4.41	0.14
195	22.42	36.27	288.8	4.45	0.51
215	21.60	36.13	277.0	4.33	0.45
327	13.70	34.78	192.4	3.96	0.95
437	9.39	34.58	130.8	1.89	2.04
537	7.60	34.56	106.0	2.17	2.16
652	6.29	34.54	90.2	2.87	2.11
873	5.02	34.52	76.8	2.97	2.16
1088	4.26	34.56	65.9	2.60	2.17
1309	3.64	34.63	54.7	2.64	2.79

Station 81 (O-23): 16°02'S., 134°57'W., August 24, 1956. Messenger time: 1940 GCT. Weather: 15, cloud coverage 7. Wind: 060°, 09 kt. Sea: 1-3 ft. Wire angle: 24°. BT slide: 180. Dry bulb: 75.5°F. Wet bulb: 72.5°F. Barometric pressure: 1017 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.52	36.15	356.0	4.13	0.83
24	24.52	36.15	356.0	3.91	0.91
52	24.50	36.13	357.0	3.95	0.75
71	23.80	36.13	337.0	3.27	0.46
99	23.17	36.29	307.7	3.72	0.92 P
204	20.70	36.00	263.2	3.61	1.11 P
304	16.13	35.14	216.4	3.46	0.74
404	10.14	34.52	147.2	2.26	2.13
505	7.48	34.45	112.5	2.00	2.70
611	6.22	34.43	97.6	2.44	2.73
813	5.40	34.51	82.0	1.98	1.78
1023	4.43	34.52	70.7	2.03	1.73
1235	3.73	34.56	60.8	2.14	3.16

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 82 (O-24): 17°35'S., 134°58'W., August 25, 1956. Messenger time: 0527 GCT. Weather: 03, cloud coverage 8. Wind: 020°, 11 kt. Sea: < 1 ft. Wire angle: 10°. BT slide: 184. Dry bulb: 76.2°F. Wet bulb: 72.0°F. Barometric pressure: 1016 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.51	36.49	331.1	4.06	0.55
53	24.48	36.49	330.4	4.10	0.57
106	24.45	36.51	328.1	3.91	0.54
181	22.67	36.36	289.0	3.74	0.53
218	22.19	36.33	278.1	3.88	0.46
245	21.94	NG	342.5	4.00	0.28
362	17.36	NG	289.3	3.69	0.66
486	9.74	34.51	141.6	2.30	1.91
603	6.52	34.45	99.8	2.60	2.86
725	5.35	34.45	85.8	2.89	2.69
968	4.68	34.54	71.7	2.18	1.92
1205	3.88	34.56	62.2	2.23	2.08
1440	3.32	34.58	55.6	2.58	3.04

Station 83 (O-25): 19°02'S., 135°02'W., August 25, 1956. Messenger time: 1623 GCT. Weather: 02, cloud coverage 1. Wind: 020°, 11 kt. Sea: < 1 ft. Wire angle: 03°. BT slide: 188. Dry bulb: 76.3°F. Wet bulb: 72.3°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.78	36.53	336.2	4.04	NG(C)
52	24.80	36.49	339.9	4.01	-
100	24.64	36.53	332.0	3.95	-
158	23.34	36.36	307.7	3.91	-
222	22.22	36.27	283.3	3.81	-
340	17.25	35.30	230.0	NG	-
453	11.24	34.65	156.2	3.57	-
559	7.30	34.42	112.2	3.32	-
682	5.83	34.40	95.1	3.85	-
905	4.63	34.49	75.0	NG	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 83 (O-25) Deep: 19°04'S., 135°03'W., August 25, 1956. Messenger time: 1711 GCT. Weather: 03, cloud coverage 1. Wind: 020°, 10 kt. Sea: < 1 ft. Wire angle: 03°. BT slide: 188. Dry bulb: 76.3°F. Wet bulb: 72.3°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
639	6.24	34.40	100.0	3.79	NG(C)
844	4.91	34.43	82.4	3.20	-
1058	4.18	34.54	66.6	2.81	-
1589	2.72	34.63	46.5	3.13	-
2114	2.11	34.67	38.6	3.27	-
2451	1.90	34.70	34.7	3.47	-
2527	-	-	-	-	-

Station 85 (O-26): 19°02'S., 136°59'W., August 26, 1956. Messenger time: 0851 GCT. Weather: 01, cloud coverage 1. Wind: 010°, 14 kt. Sea: 1-3 ft. Wire angle: 12°. BT slide: 193. Dry bulb: 76.8°F. Wet bulb: 71.9°F. Barometric pressure: 1016 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.68	36.53	333.3	4.91	0.40
47	24.68	36.51	335.0	4.80	0.37
104	24.61	36.49	334.3	4.79	0.31
146	24.26	36.40	330.4	4.69	0.07
166	23.78	36.36	319.8	4.65	0.53
213	21.90	36.11	286.2	4.47	0.55
317	17.66	35.37	234.4	4.48	0.73
425	11.73	34.70	161.1	4.11	1.48
529	7.67	34.43	116.6	3.78	2.36
639	5.90	34.38	97.5	4.24	2.39
639	5.97	34.38	98.2	-	-
850	4.72	34.45	79.0	3.41	1.70
1056	4.02	34.51	67.4	3.18	1.56
1266	3.45	34.56	59.2	3.13	2.99

Table 17.--Observed oceanographic station data Hugh M. Smith cruise 35 (cont'd)

Station 87 (O-27): 19°01'S., 139°01'W., August 26, 1956. Messenger time: first cast 2208 GCT, second cast 2226 GCT. Weather: 15, cloud coverage 3. Wind: 330°, 18 kt. Sea: 1-3 ft. Wire angle: first cast 15°, second cast 22°. BT slide: 198. Dry bulb: 78.2°F. Wet bulb: 73.2°F. Barometric pressure: 1014 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	0	25.01	36.49	346.0	4.74	0.76
	129	24.70	36.47	338.2	4.79	0.58
I	178	23.99	36.36	325.8	4.58	0.26
	188	23.47	36.29	316.2	4.53	0.69
	207	23.25	36.31	308.6	4.50	0.74
II	314	17.70	35.39	233.8	4.49	0.87
	419	12.85	34.79	175.2	4.21	1.29
	527	8.28	34.43	125.3	3.69	2.29
	631	6.18	34.36	102.3	4.30	2.51
	631	6.24	34.36	103.1	-	-
	839	5.09	34.43	84.3	3.46	2.36
	1053	4.24	34.51	69.5	3.11	2.50
	1266	3.46	34.58	56.8	3.19	3.08

Station 89 (O-28): 18°58'S., 141°02'W., August 27, 1956. Messenger time: 1251 GCT. Weather: 02, cloud coverage 1. Wind: 320°, 18 kt. Sea: 3-5 ft. Wire angle: 12°. BT slide: 203. Dry bulb: 77.0°F. Wet bulb: 74.5°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	24.82	36.33	351.7	4.89	0.36
69	24.94	36.36	353.1	4.80	0.34
105	25.07	36.45	350.2	4.75	0.26
121	24.74	36.40	344.5	4.74	0.16
164	23.10	36.18	313.8	4.58	0.38
233	21.45	35.95	286.2	4.54	0.66
348	17.47	35.35	231.2	4.38	0.47
469	11.10	34.61	156.7	4.35	1.46
586	6.98	34.40	109.3	3.84	2.08
700	5.94	34.38	97.8	3.90	2.32
700	5.99	34.38	98.3	-	-
926	4.74	34.47	77.7	3.31	1.80
1149	3.49	34.54	60.0	3.39	NG
1360	2.86	34.56	53.0	3.50	2.63
1360	-	-	-	-	2.68

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 91 (O-29): 18°56'S., 143°02'W., August 28, 1956. Messenger time: 0236 GCT. Weather: 02, cloud coverage 1. Wind: 310°, 18 kt. Sea: 1-3 ft. Wire angle: 08°. BT slide: 208. Dry bulb: 78.8°F. Wet bulb: 74.4°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.14	36.35	360.0	4.76	0.44
48	25.09	36.35	358.1	4.75	0.44
96	24.89	36.35	352.2	4.72	0.37
165	23.52	36.22	322.4	4.56	0.29
223	21.29	35.95	281.9	4.40	0.54
334	16.19	35.19	214.2	4.56	0.82
444	11.24	34.67	154.8	3.92	1.37
555	7.90	34.45	118.3	3.74	2.18
666	5.92	34.38	97.7	4.01	2.50
666	5.99	34.38	98.3	-	-
889	4.74	34.47	77.6	3.49	2.72 P

Station 91 (O-29) Deep: 18°57'S., 143°01'W., August 28, 1956. Messenger time: first cast 0323 GCT, second cast 0444 GCT. Weather: 02, cloud coverage 1. Wind: 320°, 21 kt. Sea: 1-3 ft. Wire angle: first cast 05°, second cast not recorded. BT slide: 208. Dry bulb: 78.8°F. Wet bulb: 74.4°F. Barometric pressure: 1013 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	678	5.91	34.38	97.7	3.96	1.99 P
I	903	4.74	34.51	74.6	3.25	1.99
	1123	3.66	34.51	63.8	3.37	1.88
	1698	2.50	34.61	46.3	3.36	2.95
II	2260	2.09	34.63	41.3	3.47	1.86
	2846	1.84	34.65	38.0	3.66	2.00
	3387	1.65	34.69	33.7	3.88	2.10

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 92 (O-30): 17°33'S., 142°56'W., August 28, 1956. Messenger time: 1525 GCT. Weather: 01, cloud coverage 5. Wind: 310°, 09 kt. Sea: < 1 ft. Wire angle: 08°. BT slide: 212. Dry bulb: 78.2°F. Wet bulb: 72.1°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.36	36.40	362.8	4.78	0.56
47	25.36	36.36	365.1	4.83	0.44
121	25.14	36.36	359.1	4.70	0.42
131	24.98	36.36	354.4	4.61	0.39
162	23.34	36.13	321.7	4.52	0.54
230	20.44	35.79	271.8	4.40	0.51
329	16.94	35.26	225.9	4.33	0.66
439	11.62	34.67	161.5	3.72	2.09
549	7.73	34.45	116.1	3.23	2.42
659	6.29	34.45	96.9	3.32	2.09
659	6.35	34.45	97.7	-	-
881	4.72	34.47	77.5	3.24	2.16
1078	3.62	34.54	61.3	3.34	2.00
1294	3.22	34.52	59.2	3.44	2.69

Station 94 (O-31): 16°01'S., 142°59'W., August 29, 1956. Messenger time: 0237 GCT. Weather: 02, cloud coverage 7. Wind: 350°, 05 kt. Sea: < 1 ft. Wire angle: 07°. BT slide: 217. Dry bulb: 79.6°F. Wet bulb: 72.4°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.74	36.27	383.1	4.73	0.42
48	25.48	36.42	364.3	4.67	NG
117	25.24	36.42	357.7	4.51	0.24
155	24.16	36.38	329.0	4.41	0.24
186	23.11	36.26	308.2	4.35	0.24
219	21.88	36.13	284.3	4.29	0.31
326	16.91	35.28	223.9	4.23	0.44
437	10.28	34.61	142.8	2.99	1.61
541	7.45	34.51	107.6	2.56	2.21
650	6.30	34.51	92.6	2.88	1.74
864	5.12	NS	-	2.98	1.97
1068	4.16	34.52	67.9	3.13	1.75
1276	3.58	34.54	60.9	3.20	2.40

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 96 (O-32): 14°34'S., 143°04'W., August 29, 1956. Messenger time: 1351 GCT. Weather: 02, cloud coverage 1. Wind: 070°, 11 kt. Sea: < 1 ft. Wire angle: 14°. BT slide: 221. Dry bulb: 76.8°F. Wet bulb: 71.4°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.56	36.22	381.2	4.75	0.57
45	25.50	36.35	370.0	4.74	0.55
100	24.40	36.40	334.5	4.51	0.42
121	23.94	36.40	321.7	4.31	0.19
151	23.44	36.40	307.2	4.54	0.56
207	21.08	35.93	277.9	4.30	0.56
307	15.06	34.97	206.0	4.05	0.87
413	10.28	34.52	149.6	2.50	2.06
413	10.33	34.52	150.4	-	-
513	7.63	34.52	109.4	2.03	2.73
619	6.20	34.54	89.2	3.16	2.51
825	5.06	34.56	74.2	3.08	1.62
1026	4.10	34.54	65.8	3.06	1.61
1230	3.52	34.61	55.2	3.05	2.81

Station 98 (O-33): 12°59'S., 143°05'W., August 30, 1956. Messenger time: 0051 GCT. Weather: 02, cloud coverage 1. Wind: 090°, 18 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 225. Dry bulb: 79.1°F. Wet bulb: 74.0°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.82	35.95	408.7	4.72	0.34
45	25.58	36.22	381.6	4.73	0.34
89	25.48	36.26	376.1	4.69	0.37
128	24.16	36.38	329.0	4.24	0.26
148	23.74	36.40	316.0	4.21	0.34
202	22.82	36.29	298.2	4.21	0.44
301	16.81	35.21	226.6	4.16	0.62
404	9.76	34.54	139.6	2.43	1.41
503	7.60	34.52	109.0	2.78	2.28
607	6.48	34.51	94.8	2.93	2.42
808	5.14	34.51	79.0	2.83	1.96
1006	4.44	34.47	74.6	2.84	1.14
1210	3.92	34.51	66.3	2.85	2.61
1146	-	-	-	-	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 100 (O-34): 11°18'S., 143°01'W., August 30, 1956. Messenger time: 1319 GCT. Weather: 02, cloud coverage 1. Wind: 080°, 20 kt. Sea: 5-8 ft. Wire angle: 25°. BT slide: 229. Dry bulb: 77.7°F. Wet bulb: 72.3°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.12	35.68	437.0	4.73	0.71
28	26.14	35.71	435.5	4.78	0.72
88	25.66	35.66	424.8	4.74	0.79
120	25.07	35.77	399.4	3.91	0.51
153	23.90	35.99	350.1	4.07	0.94
204	20.93	35.82	282.1	4.04	0.94
307	12.97	34.78	178.2	2.52	1.34
414	9.20	34.63	124.2	2.05	2.57
517	7.62	34.58	104.7	2.59	2.74
621	6.48	34.54	92.6	2.50	2.83
621	6.54	34.54	93.5	-	-
824	5.54	34.51	83.7	2.10	2.20
1031	4.61	34.52	72.5	2.35	2.22
1230	3.84	34.56	61.8	2.57	3.03

Station 102 (O-35): 10°00'S., 142°58'W., August 30, 1956. Messenger time: 2254 GCT. Weather: 01, cloud coverage 6. Wind: 060°, 20 kt. Sea: 5-8 ft. Wire angle: 32°. BT slide: 233. Dry bulb: 79.1°F. Wet bulb: 73.0°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.24	35.55	450.1	4.66	NG
41	26.21	35.57	447.7	4.75	-
117	26.21	35.62	444.1	4.61	-
148	24.86	35.93	381.9	4.13	-
198	22.94	36.26	303.8	4.05	-
298	12.69	34.78	172.7	2.24	-
403	9.16	34.67	120.5	2.25	-
506	7.87	34.63	104.4	2.08	-
610	7.11	34.54	100.8	2.44	-
821	5.66	34.51	84.9	1.87	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 102 (O-35) Deep: 10°00'S., 143°01'W., August 30, 1956. Messenger time: 2355 GCT. Weather: 02, cloud coverage 6. Wind: 080°, 20 kt. Sea: 5-8 ft. Wire angle: 03°. BT slide: 233. Dry bulb: 79.1°F. Wet bulb: 73.0°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
712	6.42	34.52	93.4	2.36	NG
957	4.89	34.52	75.3	1.97	-
1197	3.95	34.58	61.4	2.50	-
1791	2.58	34.63	45.3	2.82	-
2391	2.00	34.61	42.1	3.02	-
2977	1.78	34.65	37.5	3.32	-
3552	1.57	34.67	34.6	3.66	-

Station 104 (O-36): 08°16'S., 143°04'W., August 31, 1956. Messenger time: 1331 GCT. Weather: 02, cloud coverage not recorded. Wind: 090°, 16 kt. Sea: 305 ft. Wire angle: 32°. BT slide: 237. Dry bulb: 79.0°F. Wet bulb: 73.9°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.96	35.46	448.0	4.69	0.91
25	25.98	35.48	447.2	4.71	0.89
55	25.99	35.48	447.4	4.69	0.96
85	25.98	35.46	448.6	4.42	0.66
115	25.27	35.82	401.7	4.10	1.22
188	19.55	35.62	261.6	3.82	1.19
283	11.46	34.76	152.0	1.42	2.34
382	9.38	34.70	121.8	1.98	2.74
478	8.21	34.63	109.3	NG	2.66
575	7.48	34.60	101.3	1.93	2.97
765	5.78	34.52	85.5	1.74	2.15
957	4.66	34.52	73.0	2.44	2.30
1143	4.09	34.54	65.6	2.51	3.21

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 106 (O-37):.07°00'S., 143°02'W., August 31, 1956. Messenger time: first cast 2334 GCT, second cast 2358 GCT. Weather: 03, cloud coverage 3. Wind: 080°, 15 kt. Sea: 5-8 ft. Wire angle: first cast 35°, second cast 43°. BT slide: 241. Dry bulb: 79.2°F. Wet bulb: 75.2°F. Barometric pressure: 1009 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	0	26.04	35.43	452.7	4.67	1.50
	63	26.00	35.43	451.5	4.69	0.88
	121	25.96	35.48	446.6	4.67	0.81
	164	22.60	36.15	302.2	3.98	0.50
	184	20.47	35.77	273.6	3.91	1.14
I	206	17.46	35.34	231.8	3.50	1.27
	308	10.10	34.76	128.8	2.26	2.01
	371	9.27	34.70	120.1	2.50	2.19
II	464	8.32	34.61	112.5	2.00	3.16
	560	7.55	34.65	98.6	1.79	3.06
	560	7.62	34.65	99.6	-	-
	766	6.09	34.52	89.1	1.59	1.85
	987	4.82	34.52	74.7	2.17	1.91
	1229	3.90	34.56	62.4	2.42	3.08

Station 108 (O-38): 05°27'S., 143°02'W., September 1, 1956. Messenger time: 1154 GCT. Weather: 16, cloud coverage not recorded. Wind: 080°, 18 kt. Sea: 3-5 ft. Wire angle: 34°. BT slide: 245. Dry bulb: 78.1°F. Wet bulb: 73.6°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.71	35.44	442.0	4.66	0.93
41	25.74	35.46	441.6	4.58	1.18
69	25.75	35.46	441.9	4.63	0.76
110	25.62	35.46	438.1	4.35	0.43
151	21.53	35.88	293.4	3.81	0.93
195	14.62	35.07	189.5	2.09	1.98
293	10.84	34.83	135.9	2.09 P	2.04
387	9.72	34.74	124.3	0.66	2.77
486	8.50	34.69	109.3	1.48	2.78
581	7.68	34.61	103.4	1.83	2.61
581	7.75	34.61	104.4	-	-
780	6.18	34.56	87.4	1.58	1.78
980	5.01	34.54	75.3	1.78	1.50
1185	4.18	34.54	66.6	2.21	3.10

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 110 (O-39): 04°01'S., 143°06'W., September 1, 1956. Messenger time: 2245 GCT. Weather: 03, cloud coverage 3. Wind: 100°, 16 kt. Sea: 3-5 ft. Wire angle: 35°. BT slide: 248. Dry bulb: 78.3°F. Wet bulb: 73.8°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.83	35.50	441.3	4.66	1.02
48	25.66	35.52	434.9	4.65	0.93
108	25.08	35.52	417.9	4.59	0.94
128	21.00	35.79	286.0	3.78	0.61
148	16.54	35.25	217.6	2.55	1.75
197	12.72	34.90	164.6	0.55	2.70
294	11.23	34.78	146.6	1.27	2.07
397	10.12	34.74	130.7	1.14	2.34
495	8.42	34.65	111.0	0.53	3.22
598	7.16	34.58	98.4	1.02	2.24
598	7.23	34.58	99.3	-	-
799	5.72	34.56	82.0	1.73	1.95
1012	4.55	34.54	70.5	1.98	2.05
1236	3.74	34.58	59.4	2.35	3.26

Station 112 (O-40): 01°54'S., 143°09'W., September 2, 1956. Messenger time: 1407 GCT. Weather: 03, cloud coverage 2. Wind: 110°, 15 kt. Sea: 3-5 ft. Wire angle: 27°. BT slide: 253. Dry bulb: 77.3°F. Wet bulb: 73.0°F. Barometric pressure: 1008 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.60	35.53	432.4	4.63	0.85
53	25.60	35.55	431.0	4.55	0.91
105	23.47	35.59	366.7	4.16	0.97
148	13.58	35.03	171.7	1.12	2.01
162	13.12	34.99	165.5	1.01	2.53
229	11.89	34.92	147.7	0.97	2.61
344	10.78	34.83	134.9	1.13	2.43
454	9.33	34.72	119.6	0.79	2.99
569	7.80	34.63	103.6	0.95	3.29
681	6.60	34.58	91.2	1.48	3.23
681	6.69	34.58	92.2	-	-
908	5.06	34.56	74.3	1.90	2.48
1129	4.12	34.58	63.0	2.05	2.34
1344	3.39	34.60	54.6	2.27	3.17

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 113 (O-41): 00°02'N., 143°03'W., September 2, 1956. Messenger time: 0228 GCT. Weather: 03, cloud coverage 1. Wind: 080°, 14 kt. Sea: 1-3 ft. Wire angle: 20°. BT slide: 258. Dry bulb: 78.0°F. Wet bulb: 75.2°F. Barometric pressure: 1006 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.34	35.26	444.2	4.34	0.52
38	25.18	35.25	440.0	4.30	0.52
95	22.41	35.34	355.8	3.35	0.83
176	15.86	35.10	213.7	2.89	0.85
239	12.36	34.90	157.9	2.70	1.62
373	10.44	34.78	133.0	0.93	2.27
498	8.09	34.65	106.1	0.70	1.98
625	7.16	34.61	96.2	1.11	2.56
755	5.87	34.54	85.2	1.61	2.80
1003	4.84	34.54	73.4	1.89	2.83

Station 113 (O-41) Deep: 00°02'N., 143°02'W., September 3, 1956. Messenger time: first cast 0336 GCT, second cast 0507 GCT. Weather: 02, cloud coverage 1. Wind: 090°, 16 kt. Sea: 1-3 ft. Wire angle: first cast 26°, second cast 10°. BT slide: 258. Dry bulb: 78.0°F. Wet bulb: 75.2°F. Barometric pressure: 1006 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
I	677	6.72	34.58	92.7	1.18	-
	903	5.16	34.54	76.9	1.74	-
II	1105	4.10	34.60	61.3	1.83	3.22
	1584	2.88	34.60	50.0	2.01	2.69
	2057	2.28	34.65	41.4	2.25	1.88
	2473	1.94	34.67	37.2	2.58	1.72
	2898	1.74	34.69	34.3	2.86	3.01

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 114 (O-42): 01°58'N., 143°00'W., September 3, 1956. Messenger time: 1940 GCT. Weather: 01, cloud coverage 3. Wind: 120°, 16 kt. Sea: 1-3 ft. Wire angle: 26°. BT slide: 263. Dry bulb: 79.0°F. Wet bulb: 74.6°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.16	34.94	491.3	4.59	0.54
54	26.14	34.92	492.2	4.62	0.54
103	23.88	34.99	421.4	3.97	0.56
121	16.83	34.81	256.0	2.09	0.73
175	12.80	34.94	163.2	1.24	2.09
224	12.04	34.88	153.5	1.02	2.10
350	10.83	34.81	137.3	1.33	NG
468	9.40	34.70	122.2	1.42	2.07
586	8.03	34.63	106.7	0.89	2.67
709	6.61	34.58	91.4	1.08	2.58
709	6.70	34.58	92.5	-	-
938	5.06	34.56	74.3	1.70	1.43
1180	4.06	34.58	62.4	1.75	1.54
1417	3.22	34.87	32.7	1.30	1.49 P

Station 116 (O-43): 01°59'N., 145°02'W., September 4, 1956. Messenger time: 0911 GCT. Weather: 62, cloud coverage not recorded. Wind: 160°, 14 kt. Sea: 3-5 ft. Wire angle: 22°. BT slide: 268. Dry bulb: 79.1°F. Wet bulb: 76.1°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.85	35.05	504.1	4.65	0.74
34	26.86	35.03	505.7	4.40	0.56
83	26.89	35.03	506.6	4.59	0.63
117	22.01	34.92	375.5	3.27	0.62
136	16.54	34.81	249.6	2.11	2.07
242	11.38	34.87	142.6	1.35	2.56
339	11.09	34.83	140.3	0.89 P	2.30
446	9.90	34.76	125.7	1.55	2.51
563	8.37	34.65	110.3	0.89	2.98
675	7.07	34.58	97.2	1.04	3.15
675	7.16	34.58	98.4	-	-
899	5.32	34.56	77.3	1.77	1.94
1125	4.18	34.58	63.6	1.86	2.04
1350	3.62	34.60	56.7	1.92	3.14

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 117 (O-44): 01°56'N., 147°02'W., September 4, 1956. Messenger time: 2058 GCT. Weather: 03, cloud coverage 6. Wind: 110°, 14 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 273. Dry bulb: 81.5°F. Wet bulb: 78.0°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.97	35.08	505.6	4.67	0.35
69	26.92	35.07	505.0	4.65	0.41
132	20.00	34.85	328.5	2.89	1.22
156	13.64	34.74	194.2	2.12	NG
186	11.97	34.90	150.6	1.29	2.07
225	11.54	34.87	145.5	1.36	2.11
343	10.84	34.81	137.5	1.23	NG
451	9.57	34.72	123.4	1.46	2.39
569	8.25	34.67	107.1	0.79	2.83
682	6.99	34.61	93.8	1.24	2.83
682	7.04	34.61	94.7	-	-
909	5.16	34.60	72.4	1.93	1.35
1135	4.10	34.61	60.5	1.96	1.34
1362	3.58	34.63	54.1	2.00	3.11

Station 119 (O-45): 01°58'N., 149°02'W., September 5, 1956. Messenger time: 0950 GCT. Weather: 00, cloud coverage not recorded. Wind: 110°, 15 kt. Sea: 1-3 ft. Wire angle: 20°. BT slide: 278. Dry bulb: 80.3°F. Wet bulb: 77.7°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.95	35.07	505.7	4.63	0.94
48	26.90	35.07	504.2	4.66	0.50
100	26.88	35.07	503.5	4.55	0.53
134	20.86	34.90	346.7	3.11	NG
177	12.48	34.72	173.4	1.29	1.86
219	11.52	34.87	145.3	2.14	2.25
334	10.80	34.81	136.7	1.23	2.25
420	9.90	34.76	125.7	1.60	2.26
555	8.26	34.67	107.2	0.90	2.71
667	7.06	34.63	93.4	1.01	2.74
667	7.13	34.63	94.3	-	-
889	5.38	34.60	75.0	1.78	1.66
1113	4.28	34.63	60.9	1.79	1.69
1338	3.56	34.63	53.9	1.99	2.86

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 120 (O-46): 02°00'N., 151°03'W., September 5, 1956. Messenger time: 2032 GCT. Weather: 01, cloud coverage 2. Wind: 120°, 14 kt. Sea: 1-3 ft. Wire angle: 05°. BT slide: 282. Dry bulb: 81.2°F. Wet bulb: 77.5°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.80	35.03	504.0	4.60	0.78
49	26.71	35.03	501.4	4.57	0.65
109	25.09	35.05	451.9	4.28	0.88
138	18.54	34.85	292.9	2.78	1.07
173	13.20	34.76	184.0	2.14	1.98
228	11.50	34.87	144.7	2.04	2.06
347	10.76	34.81	136.1	1.79	2.47
457	9.96	34.78	125.1	1.51	2.41
557	8.77	34.70	112.3	0.90	3.00
656	7.22	34.63	95.5	0.79	2.90
859	5.47	34.60	76.0	1.75	1.84
859	5.52	34.60	76.6	-	-
1066	4.50	34.60	65.4	1.98	1.94
1281	3.88	34.61	58.4	1.98	2.88

Station 122 (O-47): 00°16'S., 151°13'W., September 6, 1956. Messenger time: 1232 GCT. Weather: 02, cloud coverage not recorded. Wind: 110°, 16 kt. Sea: 1-3 ft. Wire angle: 35°. BT slide: 287. Dry bulb: 78.0°F. Wet bulb: 76.4°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.44	35.10	458.6	4.34	1.28
36	25.36	35.12	454.8	4.24	0.90
83	24.24	35.19	417.4	3.73	0.98
134	19.45	35.41	274.2	2.93	1.16
182	14.54	35.07	188.0	3.10	1.60
281	12.20	34.90	154.8	2.66	1.80
377	10.94	34.81	139.2	0.90	2.42
476	9.16	34.70	118.3	0.76	2.69
577	8.02	34.72	99.9	1.17	2.48
793	5.94	34.61	80.7	1.67	3.23
793	6.02	34.61	81.6	-	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 122 (O-47) Deep: 00°17'S., 151°21'W., September 6, 1956. Messenger time: first cast 1342 GCT, second cast 1447 GCT, third cast 1621 GCT. Weather: 02, cloud coverage not recorded. Wind: 090°, 16 kt. Sea: 1-3 ft. Wire angle: first cast 40°, second cast 30°, third cast 32°. BT slide: 287. Dry bulb: 78.0°F. Wet bulb: 76.4°F. Barometric pressure: 1011 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	573	8.21	34.67	106.5	0.80	NG
I	783	6.26	34.61	84.6	1.50	2.20 P
	783	6.31	34.61	85.3	-	-
II	955	5.33	34.58	75.9	1.82	3.02
	1590	3.00	34.61	50.3	2.08	2.37
III	2185	2.24	34.63	42.7	2.46	2.16
	2882	1.86	34.69	35.1	2.75	2.02
	3309	1.63	34.69	33.6	3.18	2.57

Station 123 (O-48): 01°58'S., 151°00'W., September 6, 1956. Messenger time: 0456 GCT. Weather: 02, cloud coverage 2. Wind: 110°, 13 kt. Sea: 3-5 ft. Wire angle: 31°. BT slide: 291. Dry bulb: 78.8°F. Wet bulb: 75.0°F. Baromteric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	25.68	35.30	451.2	4.50	1.04
45	25.50	35.32	444.5	4.81	0.85
95	25.34	35.28	442.7	4.42	0.85
127	25.35	35.34	438.6	4.31	0.85
158	17.59	35.46	226.0	2.75	1.65
208	12.35	34.92	156.2	0.87	2.66
318	10.98	34.83	138.3	1.56	2.51
419	10.12	34.76	129.1	1.86	2.50
531	8.86	34.70	113.8	0.90	3.18
639	7.15	34.63	94.6	1.24	3.06
639	7.36	34.63	97.5	-	-
859	5.58	34.56	80.3	1.69	2.56
1083	4.40	34.58	65.8	1.93	2.91
1310	3.69	34.60	57.3	2.17	3.38

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 125 (O-49): 04°04'S., 151°01'W., September 7, 1956. Messenger time: 1951 GCT. Weather: 01, cloud coverage 1. Wind: 070°, 14 kt. Sea: 5-8 ft. Wire angle: 32°. BT slide: 296. Dry bulb: 79.7°F. Wet bulb: 74.6°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.06	35.55	444.5	4.62	1.24
34	26.04	35.53	445.5	4.61	0.90
97	26.06	35.53	446.0	4.52	1.19
135	26.00	35.53	444.3	4.31	0.73
166	22.60	35.73	332.7	4.02	1.21
208	15.82	35.23	203.2	2.15	2.18
315	10.81	34.85	134.0	1.97	2.17
417	9.50	34.78	117.8	1.48	2.62
520	8.30	34.69	106.3	1.85	2.82
624	7.38	34.67	94.8	1.08	3.34
840	5.57	34.58	78.7	1.80	2.57
1052	4.48	34.56	68.2	2.01	2.44
1272	3.61	34.56	59.8	1.80	3.32

Station 126 (O-50): 05°29'S., 151°10'W., September 8, 1956. Messenger time: 0536 GCT. Weather: 02, cloud coverage 5. Wind: 080°, 18 kt. Sea: 3-5 ft. Wire angle: 37°. BT slide: 300. Dry bulb: 79.7°F. Wet bulb: 73.9°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.39	35.50	458.1	4.62	0.96
39	26.34	35.48	458.0	4.57	1.02
78	26.23	35.53	451.1	4.55	0.89
111	26.18	35.57	446.7	4.34	0.68
152	25.60	36.06	393.9	3.97	0.97
167	23.19	36.06	324.9	3.86	1.10
253	12.18	34.94	151.5	2.00	2.15
334	10.17	34.81	126.1	1.70	2.61
424	8.99	34.70	115.7	1.56	2.99
513	7.95	34.65	104.2	2.44	2.61 Q
513	8.04	34.65	105.4	-	-
693	6.62	34.58	91.5	1.98	2.19 Q
878	5.34	34.56	77.5	1.70	2.21
1070	4.21	34.56	65.5	2.24	3.18

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 127 (O-51): 07°06'S., 151°04'W., September 8, 1956. Messenger time: 1734 GCT. Weather: 03, cloud coverage 3. Wind: 050°, 18 kt. Sea: 3-5 ft. Wire angle: 08°. BT slide: 304. Dry bulb: 79.9°F. Wet bulb: 72.5°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.61	35.48	466.2	4.53	0.87
82	26.63	35.50	465.3	4.51	0.98
164	25.16	36.06	381.0	3.84	0.95
189	23.74	36.26	326.0	3.81	0.94
215	20.22	35.75	269.0	3.72	1.15
251	14.90	35.08	194.6	2.35	1.92
379	9.48	34.72	121.9	2.36	2.29
503	7.53	34.60	102.0	2.50	2.56
624	6.70	34.54	95.4	2.25	2.89
746	5.73	34.54	83.6	1.79	3.42
746	5.81	34.54	84.5	-	-
1002	4.68	34.54	71.7	2.25	2.49
1246	3.92	34.56	62.6	2.54	2.49
1493	3.25	34.58	54.9	2.62	3.14

Station 128 (O-52): 08°29'S., 151°00'W., September 9, 1956. Messenger time: 0352 GCT. Weather: 03, cloud coverage 2. Wind: 080°, 15 kt. Sea: 3-5 ft. Wire angle: 15°. BT slide: 308. Dry bulb: 79.8°F. Wet bulb: 73.3°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.86	35.75	454.1	4.58	0.78
30	26.80	35.77	450.8	4.59	0.64
66	26.77	35.77	449.8	4.57	0.78
97	26.72	35.77	448.6	NG	0.71
132	26.38	35.97	424.0	4.38	0.78
215	19.94	35.73	263.3	3.81	0.92
319	11.13	34.78	144.8	2.07	2.19
429	8.47	34.67	110.2	2.25	2.50
539	7.38	34.58	101.4	2.39	2.54
644	6.67	34.58	92.0	2.36	2.67
644	6.79	34.58	93.5	-	-
864	5.16	34.52	78.5	2.23	2.57
1081	4.08	34.60	61.1	2.56	1.82
1293	3.60	34.56	59.6	2.58	3.01

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 130 (O-53): 10°04'S., 151°00'W., September 9, 1956. Messenger time: 1523 GCT. Weather: 02, cloud coverage 2. Wind: 100°, 16 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 312. Dry bulb: 78.0°F. Wet bulb: 73.0°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.60	35.70	450.0	4.67	0.81
63	26.61	35.70	450.3	4.65	0.70
126	26.20	36.20	401.9	4.36	0.66
160	24.60	36.40	340.5	4.03	0.56
215	21.56	36.02	283.9	4.00	0.78
326	12.18	34.78	163.2	2.24	2.29
438	8.74	34.63	117.2	2.38	2.29
551	7.11	34.60	96.3	2.53	2.23
669	6.36	34.56	89.6	2.60	2.86
893	4.87	34.52	75.2	2.56	3.05
893	4.95	34.52	76.1	-	-

Station 130 (O-53) Deep: 10°05'S., 151°01'W., September 9, 1956. Messenger time: first cast 1617 GCT, second cast 1738 GCT. Weather: 15, cloud coverage 2. Wind: 080°, 16 kt. Sea: 1-3 ft. Wire angle: first cast 22°, second cast 21°. BT slide: 312. Dry bulb: 78.0°F. Wet bulb: 73.0°F. Barometric pressure: 1013 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	620	6.59	34.54	94.0	2.79	1.80 P
I	825	5.36	34.52	80.8	2.60	1.99 P
	1036	4.39	34.54	68.7	2.65	2.52
	1609	2.92	34.63	48.2	2.82	1.70
II	2166	2.17	34.67	39.0	3.20	1.56
	2708	1.88	34.69	35.3	3.32	1.57
	3252	1.64	34.70	32.9	3.60	2.76
	3252	-	-	-	-	2.85

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 131 (O-54): 11°29'S. 150°59'W., September 10, 1956. Messenger time: first cast 0357 GCT, second cast 0435 GCT. Weather: 15, cloud coverage 2. Wind: 070°, 12 kt. Sea: < 1 ft. Wire angle: first cast 34°, second cast 35°. BT slide: 316. Dry bulb: 77.8°F. Wet bulb: 72.8°F. Barometric pressure: 1013 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
	0	26.40	35.93	427.5	4.62	0.73
	33	26.34	35.91	427.2	4.67	0.71
	78	26.35	36.06	416.2	4.59	0.85
	102	25.72	36.18	388.8	4.26	0.67
	128	25.08	36.33	359.5	4.15	0.90
I	167	23.44	36.36	307.9	4.03	0.94
	254	18.20	35.43	242.6	3.91	0.87
	405	9.30	34.63	125.7	2.48	2.22
II	507	7.55	34.60	102.4	2.36	2.79
	611	6.77	34.58	93.3	2.30	2.77
	611	6.86	34.58	94.5	-	-
	836	5.31	34.52	80.2	2.50	2.32
	1065	4.31	34.54	68.0	2.56	2.50
	1306	3.52	34.56	58.9	2.78	3.11

Station 133 (O-55): 13°04'S., 151°08'W., September 10, 1956. Messenger time: 1605 GCT. Weather: 15, cloud coverage 7. Wind: 050°, 10 kt. Sea: 1-3 ft. Wire angle: 12°. BT slide: 320. Dry bulb: 76.8°F. Wet bulb: 73.5°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.35	36.22	405.0	4.69	NG
37	26.37	36.22	405.2	3.53	-
74	26.35	36.22	405.0	4.71	-
109	26.22	36.38	389.5	4.58	-
146	25.63	36.42	369.0	4.35	-
240	22.83	36.22	303.8	4.16	-
364	14.48	34.96	194.7	3.81	-
480	8.50	34.51	122.7	3.19	-
605	6.38	34.47	96.5	3.47	-
723	5.39	34.47	84.8	3.33	-
723	5.48	34.47	85.8	-	-
965	4.52	34.49	73.9	3.27	-
1198	3.70	34.54	62.0	2.98	-
1430	3.05	34.56	54.6	3.11	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 135 (O-56): 14°30'S., 151°04'W., September 11, 1956. Messenger time: 0217 GCT. Weather: 15, cloud coverage 5. Wind: 000°, 17 kt. Sea: < 1 ft. Wire angle: 18°. BT slide: 324. Dry bulb: 80.0°F. Wet bulb: 74.3°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.36	36.29	400.3	4.67	0.69
66	26.12	36.40	385.0	4.63	0.67
138	25.32	36.44	358.1	4.30	0.89
163	24.14	36.36	330.0	3.99	0.90
189	23.28	36.26	313.0	4.00	0.82
220	22.27	36.11	296.0	3.96	0.98
334	16.05	35.14	214.7	3.96	0.98
443	10.54	34.63	145.7	2.73	2.29
557	7.68	34.51	110.8	2.81	2.79
665	5.98	34.45	93.0	3.87	2.73
882	4.70	34.49	75.7	3.32	2.20
1102	3.84	34.52	64.8	3.18	2.46
1320	3.32	34.56	57.2	3.13	2.86

Station 140 (O-57): 14°32'S., 152°57'W., September 20, 1956. Messenger time: 0843 GCT. Weather: 03, cloud coverage 3. Wind: 060°, 10 kt. Sea: < 1 ft. Wire angle: 15°. BT slide: 341. Dry bulb: 79.9°F. Wet bulb: 73.0°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.52	36.26	407.2	5.03	0.54
66	26.31	36.29	398.7	4.60	0.51
97	26.17	36.36	389.1	4.52	0.57
132	25.96	36.44	377.0	4.37	0.28 P
163	24.44	36.44	333.1	4.13	0.83
219	21.84	36.02	291.4	4.01	0.82
330	15.86	35.12	212.2	3.98	1.08
436	11.09	34.67	152.1	3.10	1.96
547	7.98	34.51	114.8	3.00	2.56
654	6.34	34.43	99.1	3.34	2.35
654	6.43	34.43	100.3	-	-
862	4.60	34.47	76.2	3.32	1.75
1080	3.80	34.51	65.2	3.14	1.86
1295	3.32	34.54	58.7	3.24	2.60

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 142 (O-58): 14°29'S. 155°18'W., September 21, 1956. Messenger time: 0055 GCT. Weather: 02, cloud coverage 2. Wind: 060°, 09 kt. Sea: < 1 ft. Wire angle: 08°. BT slide: 347. Dry bulb: 80.2°F. Wet bulb: 74.8°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, μg at./L.
0	26.82	36.29	414.2	4.65	0.78
79	26.40	36.33	398.6	4.58	0.76
153	25.48	36.36	368.9	4.22	0.64
164	25.24	36.38	360.3	4.13	0.60
190	24.40	36.38	335.8	3.94	0.89
228	22.66	36.15	304.0	3.80	1.14
344	16.26	35.19	215.8	3.80	NS
453	10.84	34.65	149.2	3.16	2.13
570	7.19	34.47	106.9	3.43	2.67
680	5.68	34.45	89.7	3.60	2.79
680	5.77	34.45	90.7	-	-
898	4.56	34.47	75.8	3.31	2.29 Q
1122	3.74	34.51	64.6	3.10	2.95
NG	-	-	-	-	-

Station 144 (O-59): 14°30'S., 157°34'W., September 21, 1956. Messenger time: 1649 GCT. Weather: 02, cloud coverage 7. Wind: 080°, 10 kt. Sea: 1-3 ft. Wire angle: 12°. BT slide: 352. Dry bulb: 79.1°F. Wet bulb: 75.0°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, μg at./L.
0	26.64	36.26	411.0	5.04	0.69
52	26.64	36.29	408.3	4.60	0.51
99	26.56	36.29	406.0	4.11 P	0.69
130	26.52	36.36	400.0	4.64	0.54
166	25.10	36.31	361.2	4.39	0.60
224	23.04	36.08	319.9	4.00	0.66
337	16.47	35.19	220.3	3.91	0.94
446	10.48	34.63	144.7	3.16	2.12
560	7.62	34.49	111.6	3.47	2.43
668	6.35	34.45	97.7	3.58	2.45
668	6.44	34.45	98.8	-	-
885	4.86	34.47	78.8	3.38	1.55
1104	3.84	34.54	63.4	3.21	2.04
1323	3.22	34.56	56.2	3.20	2.93

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 147 (O-60): 14°32'S., 159°59'W., September 22, 1956. Messenger time: 1029 GCT. Weather: 01, cloud coverage 2. Wind: 130°, 18 kt. Sea: 3-5 ft. Wire angle: 12°. BT slide: 358. Dry bulb: 78.0°F. Wet bulb: 75.0°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.79	36.17	421.9	4.54	0.74
78	26.70	36.20	416.9	4.32	0.56
156	26.21	36.20	402.2	4.39	0.79
166	25.74	36.20	388.1	4.08	0.45
187	24.68	36.24	354.1	3.87	0.86
224	22.82	36.04	316.3	3.77	0.80
337	16.61	35.19	223.6	3.87	0.92
449	11.16	34.63	156.2	3.07	1.91
543	8.22	34.43	124.4	3.45	2.37
672	5.85	34.36	98.4	3.74	2.58
672	5.92	34.36	99.2	-	-
888	4.44	34.42	78.3	3.30	1.98
1109	3.68	34.45	68.5	3.16	1.91
1323	3.14	34.51	59.1	3.20	3.06

Station 149 (O-61): 13°02'S., 159°57'W., September 22, 1956. Messenger time: 2158 GCT. Weather: 03, cloud coverage 5. Wind: 100°, 08 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 362. Dry bulb: 81.2°F. Wet bulb: 75.0°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	27.02	36.18	428.2	4.67	0.75
50	26.80	36.18	421.5	4.75	0.54
90	26.75	36.22	417.1	4.52	0.55
150	26.29	36.22	403.0	4.21	0.55
170	25.09	36.36	357.2	4.07	0.91
215	23.11	36.11	319.2	3.86	0.86
325	16.20	35.08	222.5	3.78	1.11
430	10.49	34.56	150.0	2.66	2.36
540	7.78	34.45	116.7	2.94	2.68
646	6.34	34.43	99.1	3.25	2.95
646	6.50	34.43	101.1	-	-
856	5.01	34.42	84.3	3.18	2.26
1071	4.21	34.43	75.1	3.13	2.76
1286	3.60	34.47	66.3	3.15	3.02

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 151 (O-62): 11°34'S., 160°07'W., September 23, 1956. Messenger time: 0940 GCT. Weather: 01, cloud coverage 1. Wind: 110°, 13 kt. Sea: < 1 ft. Wire angle: 20°. BT slide: 366. Dry bulb: 80.3°F. Wet bulb: 75.8°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	27.14	36.17	432.9	4.59	NG
29	27.00	NG	398.7	4.58	-
63	26.85	36.22	420.1	4.54	-
139	26.55	36.22	411.0	4.38	-
158	25.15	36.38	357.6	4.01	-
212	22.40	36.09	301.1	3.84	-
322	14.04	34.94	187.6	3.14	-
425	9.53	34.63	129.5	2.18	-
535	7.77	34.60	105.3	2.49	-
639	6.59	34.52	95.5	2.68	-
639	6.69	34.52	96.7	-	-
848	5.38	34.51	81.7	2.54	-
1063	4.44	34.52	70.8	2.75	-
1277	3.66	34.54	61.7	2.90	-

Station 153 (O-63): 10°01'S., 159°54'W., September 23, 1956. Messenger time: first cast 2108 GCT, second cast 2120 GCT. Weather: 01, cloud coverage 2. Wind: 120°, 15 kt. Sea: 1-3 ft. Wire angle: first cast 08°, second cast 10°. BT slide: 370. Dry bulb: 82.0°F. Wet bulb: 76.7°F. Barometric pressure: 1011 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
I	0	27.40	35.95	456.4	4.64	0.72
	58	27.24	36.02	446.2	4.59	0.78
II	110	26.98	36.11	431.9	4.53	0.59
	173	23.76	36.33	321.2	3.63	0.80
	241	20.25	35.79	266.8	3.62	0.90
	367	11.99	34.81	157.5	2.42	2.04
	483	8.00	34.61	107.8	2.52	1.96
	592	6.50	34.56	91.4	2.81	2.48
	728	5.87	34.54	85.1	2.75	2.93
	967	4.64	34.54	71.3	2.66	3.13

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 153 (O-63) Deep: 10°01'S., 159°55'W., September 23, 1956. Messenger time: 2211 GCT. Weather: 02, cloud coverage 2. Wind: 060°, 15 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 370. Dry bulb: 82.0°F. Wet bulb: 76.7°F. Barometric pressure: 1011 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
642	6.26	34.52	91.3	2.74	1.35 P
860	5.11	34.52	78.0	2.75	1.09 P
1074	4.29	34.52	69.2	2.72	2.80
1610	2.86	34.58	51.4	2.84	1.24
2153	2.20	34.65	40.8	3.11	-
2752	1.88	34.67	36.7	3.29	1.59
3264	1.66	34.69	33.8	3.60	1.31

Station 155 (O-64): 08°43'S., 159°53'W., September 24, 1956. Messenger time: 0935 GCT. Weather: 03, cloud coverage 2. Wind: 070°, 12 kt. Sea: 1-3 ft. Wire angle: 11°. BT slide: 374. Dry bulb: 81.0°F. Wet bulb: 74.5°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	27.52	35.68	479.7	4.92	0.66
51	27.38	35.71	472.8	4.73	0.74
97	27.25	35.84	459.6	4.62	0.66
134	26.48	36.18	411.7	3.99	0.65
164	24.84	36.38	348.8	3.88	0.95
221	21.45	35.97	284.8	3.87	0.90
337	11.79	34.85	151.2	1.73	2.14
448	8.76	34.69	113.1	2.41	2.36
564	7.31	34.61	98.3	2.43	2.76
676	6.46	34.58	89.4	2.46	2.61
676	6.55	34.58	90.6	-	-
898	5.24	34.56	76.4	2.61	1.69
1124	4.20	34.54	66.8	2.63	2.32
1346	3.50	34.58	57.2	2.72	2.91

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 157 (O 65): 07°02'S., 159°59'W., September 24, 1956. Messenger time: 2229 GCT. Weather: 03, cloud coverage 7. Wind: 050°, 10 kt. Sea: < 1 ft. Wire angle: 12°. BT slide: 378. Dry bulb: 81.0°F. Wet bulb: 75.8°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, μg at./L.
0	27.32	35.55	482.6	4.65	0.86
52	26.97	35.53	473.2	4.60	0.95
99	26.82	35.52	469.4	4.68	0.93
160	26.60	35.66	452.9	4.31	0.80
170	26.40	35.64	448.4	4.31	0.93
221	22.55	36.17	299.6	3.70	0.92
335	10.44	34.79	132.3	1.82	2.47
447	8.16	34.67	105.7	2.45	2.59
565	6.78	34.58	93.3	2.59	2.72
676	6.06	34.58	84.4	2.35	2.82
676	6.15	34.58	85.6	-	-
899	5.00	34.54	75.1	2.31	2.76
1124	4.17	34.58	63.4	2.25	2.17
PT	-	-	-	-	-

Station 159 (O-66): 05°32'S., 159°58'W., September 25, 1956. Messenger time: 1030 GCT. Weather: 00, cloud coverage not recorded. Wind: 070°, 16 kt. Sea: < 1 ft. Wire angle: 17°. BT slide: 383. Dry bulb: 80.0°F. Wet bulb: 75.0°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, μg at./L.
0	26.80	35.62	461.6	4.69	NG
51	26.66	35.61	458.2	4.73	-
107	26.47	35.53	458.2	4.73	-
142	26.40	35.53	456.3	4.61	-
178	24.03	36.24	335.7	3.85	-
233	17.88	35.48	231.4	3.23	-
355	9.86	34.76	125.0	2.45	-
467	8.25	34.63	110.0	2.24	-
588	7.44	34.61	100.0	2.19	-
705	6.68	34.56	93.6	1.73	-
705	6.87	34.56	96.1	-	-
938	5.08	34.54	76.0	2.11	-
1169	4.04	34.54	65.3	2.37	-
1399	3.45	34.54	59.7	2.05	-

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 161 (O-67): 04°01'S., 159°59'W., September 25, 1956. Messenger time: 2212 GCT. Weather: 01, cloud coverage 1. Wind: 090°, 13 kt. Sea: 1-3 ft. Wire angle: 30°. BT slide: 387. Dry bulb: 80.3°F. Wet bulb: 75.3°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.76	35.52	467.6	4.73	0.85
68	26.46	35.53	458.0	4.69	0.90
136	26.38	35.55	454.1	4.64	0.87
143	26.28	35.55	451.1	4.48	0.69
179	22.50	35.91	317.1	3.81	1.00
196	17.82	35.46	231.4	3.02	1.50
295	10.24	34.78	129.7	2.23	2.02
394	9.08	34.69	117.8	2.06	2.54
485	8.18	34.63	108.9	2.39 P	2.52
598	7.24	34.58	99.6	1.60	2.85
598	7.33	34.58	100.9	-	-
800	5.90	34.56	84.1	1.94	2.34
1005	4.70	34.56	70.5	2.04	2.59
1211	3.92	34.56	62.6	2.48	3.01

Station 163 (O-68): 02°06'S., 159°57'W., September 26, 1956. Messenger time: 1246 GCT. Weather: 00, cloud coverage not recorded. Wind: 120°, 18 kt. Sea: 1-3 ft. Wire angle: 28°. BT slide: 392. Dry bulb: 80.0°F. Wet bulb: 75.5°F. Barometric pressure: 1009 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.35	35.41	463.4	4.74	0.76
62	26.29	35.43	460.0	4.66	0.69
94	26.24	35.44	457.9	4.61	0.79
126	26.22	35.44	457.5	4.40	0.47
157	23.02	35.79	339.9	3.81	0.98
206	13.28	35.01	167.2	2.58	1.94
314	10.37	34.78	131.7	1.95	2.16
415	9.76	34.74	125.0	1.81	2.31
523	8.52	34.67	111.2	1.50	2.66
627	6.96	34.60	94.3	2.05	2.56
627	7.21	34.60	97.7	-	-
836	5.54	34.56	79.9	1.87	1.76 P
1049	4.39	34.56	67.2	2.15	2.62
1265	3.74	34.58	59.4	2.16	2.72

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 164 (O-69): 00°01'S., 159°52'W., September 27, 1956. Messenger time: 0304 GCT. Weather: 03, cloud coverage 2. Wind: 020°, 14 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 397. Dry bulb: 80.7°F. Wet bulb: 76.0°F. Barometric pressure: 1008 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.56	35.05	495.3	4.59	0.82
71	25.70	35.23	456.9	4.22	0.84
161	22.35	35.59	336.1	3.17	1.06
197	17.13	35.25	231.0	3.00	1.19
247	12.52	34.90	160.9	2.97	1.91
367	10.45	34.76	134.6	0.98	2.74
493	8.14	34.63	108.3	0.91	3.08
594	7.54	34.61	101.5	1.05	3.01
740	6.28	34.56	88.6	1.56	3.10
986	4.72	34.58	69.2	2.09	3.06
986	4.77	34.58	69.7	-	-

Station 164 (O-69) Deep: 00°01'S., 159°52'W., September 27, 1956. Messenger time: 0416 GCT. Weather: 03, cloud coverage 2. Wind: 110°, 13 kt. Sea: 1-3 ft. Wire angle: 20°. BT slide: 397. Dry bulb: 80.7°F. Wet bulb: 76.0°F. Barometric pressure: 1008 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
647	7.25	34.60	97.9	1.17	3.24
647	7.33	34.60	99.2	-	-
878	5.55	34.54	81.5	1.79	1.82 P
1105	4.50	34.54	69.9	1.86	1.73
1212	3.96	34.58	61.4	2.01	1.80
1615	2.95	34.61	49.9	2.07	1.63
1964	2.38	34.63	43.8	2.43	1.67
2358	1.98	34.67	37.4	2.73	2.86

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 166 (O-70): 02°00'N., 160°01'W., September 29, 1956. Messenger time: 1248 GCT. Weather: 03, cloud coverage 1. Wind: 110°, 15 kt. Sea: < 1 ft. Wire angle: 20°. BT slide: 411. Dry bulb: 80.2°F. Wet bulb: 74.8°F. Barometric pressure: 1009 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl. /ton	O_2, ml. /L.	PO_4-P, µg at. /L.
0	27.11	34.90	522.8	4.66	0.91
39	26.74	34.97	506.6	4.54	0.93
88	26.00	34.97	484.6	4.39	0.86
133	24.35	34.97	436.3	3.89	0.92
144	20.58	34.87	341.9	3.16	1.40
208	13.15	34.74	184.4	2.42	2.09
329	11.14	34.81	142.7	1.36	2.39
443	10.14	34.76	129.4	1.39	2.65
543	8.62	34.67	112.5	1.40	2.99
665	7.04	34.60	95.3	0.95	3.17
665	7.10	34.60	96.1	-	-
865	5.46	34.58	77.3	1.78	2.45
1040	4.59	34.58	67.8	2.13	2.86
1225	4.08	34.60	61.1	1.87	3.24

Station 167 (O-71): 03°57'N., 160°09'W., September 30, 1956. Messenger time: 0255 GCT. Weather: 02, cloud coverage 6. Wind: 090°, 10 kt. Sea: 1-3 ft. Wire angle: 33°. BT slide: 416. Dry bulb: 81.8°F. Wet bulb: 76.4°F. Barometric pressure: 1009 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl. /ton	O_2, ml. /L.	PO_4-P, µg at. /L.
0	27.24	34.83	531.9	4.92	0.67
25	27.04	34.83	525.9	4.72	0.56
50	27.03	34.81	527.1	4.69	0.66
101	26.46	34.92	501.7	4.46	0.73
156	25.64	34.96	474.5	4.27	0.88
209	16.46	34.79	249.2	2.48	1.86
309	10.48	34.79	133.0	2.59	2.07 P
415	9.65	34.72	124.8	1.68	2.53
536	8.79	34.63	117.7	1.75	2.54
658	7.66	34.60	103.9	1.48	2.94
658	7.75	34.60	105.2	-	-
894	5.48	34.56	79.1	1.67	1.99
1137	4.35	34.56	66.8	1.68	2.70
1382	3.66	34.58	58.6	1.96	3.43

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 169 (O-72): 05°57'N., 159°57'W., September 30, 1956. Messenger time: 1807 GCT. Weather: 02, cloud coverage 2. Wind: 160°, 19 kt. Sea: < 1 ft. Wire angle: 05°. BT slide: 421. Dry bulb: 83.2°F. Wet bulb: 74.3°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	28.02	34.70	565.7	4.54	1.03 P
57	27.98	34.83	554.8	4.54	0.66
113	27.36	35.10	516.3	4.39	0.73
181	16.58	34.72	257.1	2.66	1.46
218	12.67	34.61	184.8	1.44	2.45
256	10.68	34.67	145.2	1.22	2.83
383	8.94	34.63	120.2	1.33	2.73
518	8.03	34.60	109.0	0.98	3.00
649	7.10	34.58	97.6	0.79	3.55
778	6.12	34.52	89.7	0.85	3.62
778	6.20	34.52	90.6	-	-
1042	4.56	34.56	69.1	1.39	3.03
1302	3.72	34.61	56.9	1.74	3.30
1571	3.12	34.61	51.5	1.94	3.50

Station 171 (O-73): 07°58'N., 159°54'W., October 1, 1956. Messenger time: first cast 0958 GCT, second cast 1012 GCT. Weather: 00, cloud coverage not recorded. Wind: 080°, 18 kt. Sea: 1-3 ft. Wire angle: first cast 15°, second cast 15°. BT slide: 426. Dry bulb: 82.5°F. Wet bulb: 75.9°F. Barometric pressure: 1011 mb.

OBSERVED

	Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
I	0	28.11	34.13	609.4	4.62	0.66
II	30	28.11	34.14	608.7	4.61	0.50
	60	28.04	34.51	579.7	4.67	0.47
	70	27.70	34.58	564.2	4.74	0.39
	90	23.49	34.83	421.9	4.30	0.77
	213	10.78	34.74	141.6	0.33	3.00
	322	9.70	34.72	125.5	0.26	2.93
	426	8.68	34.76	106.7	0.36	3.29
	525	7.70	34.61	103.8	0.70	3.29
	637	6.45	34.56	90.7	0.86	3.39
	637	6.56	34.56	92.2	-	-
	846	5.40	34.58	76.7	1.08	2.93
	1059	4.46	34.60	65.0	1.08	3.38
	1272	3.81	34.63	56.3	1.47	3.50

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 172 (O-74): 09°59'N., 160°00'W., October 2, 1956. Messenger time: 0000 GCT. Weather: 01, cloud coverage 3. Wind: 040°, 18 kt. Sea: 3-5 ft. Wire angle: 32°. BT slide: 431. Dry bulb: 81.5°F. Wet bulb: 77.0°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	27.52	34.00	600.2	4.51	0.47
26	27.38	34.02	594.4	4.49	0.44
34	26.41	34.76	511.9	4.73	0.45
94	16.51	34.52	270.0	3.04	1.33
180	11.23	34.72	151.0	0.30	2.59
276	9.95	34.76	126.4	0.34	3.11
369	9.06	34.69	117.5	0.39	3.05
468	8.35	34.67	108.5	0.44	2.76
562	7.24	34.61	97.3	0.67	2.98
760	5.74	34.58	80.7	0.72	3.62
760	5.84	34.58	81.9	-	-

Station 172 (O-74) Deep: 09°59'N., 160°01'W., October 2, 1956. Messenger time: 0058 GCT. Weather: 01, cloud coverage 3. Wind: 040°, 18 kt. Sea: 3-5 ft. Wire angle: 05°. BT slide: 431. Dry bulb: 81.5°F. Wet bulb: 77.0°F. Barometric pressure: 1010 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
726	6.22	34.58	86.6	0.72	2.44 P
967	4.92	34.58	71.3	1.06	2.85 P
1207	3.97	34.58	61.5	1.45	3.43
1793	2.58	34.65	43.8	1.83	1.49
2369	1.96	34.63	40.3	2.21	1.81
2933	1.71	34.65	37.2	2.63	2.07
3513	1.55	34.69	33.0	3.07	2.81

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 174 (O-75): 11°55'N., 160°06'W., October 2, 1956. Messenger time: 1708 GCT. Weather: 02, cloud coverage 5. Wind: 050°, 17 kt. Sea: 5-8 ft. Wire angle: 10°. BT slide: 436. Dry bulb: 80.3°F. Wet bulb: 74.7°F. Barometric pressure: 1012 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.80	34.56	537.8	4.57	0.53
41	26.80	34.54	539.3	4.60	0.35
78	25.10	34.70	477.3	4.83	0.34
150	15.24	34.43	249.2	3.42	0.88
234	10.02	34.36	157.1	1.83	2.59
239	9.88	34.38	153.3	1.69	2.69
363	9.00	34.60	123.3	0.44	2.70
483	7.63	34.56	106.3	0.51	3.22
586	6.48	34.52	94.0	0.60	3.42
721	5.64	34.56	81.0	0.61	3.20
721	5.71	34.56	81.8	-	-
957	4.59	34.56	69.3	0.88	2.38
1191	3.82	34.60	58.7	1.26	3.15
1422	3.20	34.61	52.1	1.67	3.47

Station 175 (O-76): 13°56'N., 159°41'W., October 3, 1956. Messenger time: 0854 GCT. Weather: 02, cloud coverage 2. Wind: 060°, 18 kt. Sea: 3-5 ft. Wire angle: 25°. BT slide: 442. Dry bulb: 79.5°F. Wet bulb: 74.2°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.48	34.60	525.3	4.61	0.60
27	26.43	34.65	520.3	4.64	0.47
53	26.39	34.79	509.0	4.50	0.25
85	25.83	34.83	489.3	4.68	0.37
112	20.74	34.72	356.7	4.76	0.74
189	12.86	34.31	210.5	2.51	2.01
279	11.08	34.72	148.3	0.11	2.65
378	9.89	34.69	130.5	0.11	2.92
476	8.58	34.60	117.1	0.16	2.98
571	7.54	34.63	100.0	0.40	2.79
571	7.77	34.63	103.1	-	-
772	5.92	34.49	89.6	0.51	2.74
973	4.87	34.56	72.1	0.58	2.84
1177	4.19	34.63	59.9	0.96	3.54

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 176 (O-77): 15°42'N., 159°11'W., October 3, 1956. Messenger time: 2158 GCT. Weather: 16, cloud coverage 2. Wind: 030°, 14 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 447. Dry bulb: 79.6°F. Wet bulb: 73.7°F. Barometric pressure: 1014 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.34	34.83	504.7	4.61	0.48
35	26.26	34.83	502.3	4.62	0.45
65	25.49	34.69	489.3	4.68	0.39
95	23.84	34.87	429.1	4.75	0.39
165	18.72	34.88	295.0	4.36	0.70
219	13.28	34.27	221.5	3.52	1.51
329	9.34	34.42	142.0	1.01	2.65
439	8.02	34.49	117.0	0.68	3.00
548	7.18	34.51	103.8	0.59	3.13
664	6.24	34.49	93.4	0.84	3.38
664	6.48	34.49	96.2	-	-
878	5.27	34.51	80.3	0.93	2.42
1098	4.42	34.52	70.6	0.89	2.84
1324	3.80	34.54	63.0	1.42	3.54

Station 177 (O-78): 17°28 N., 158°50'W., October 4, 1956. Messenger time: 1045 GCT. Weather: 00, cloud coverage not recorded. Wind: 080°, 14 kt. Sea: 1-3 ft. Wire angle: 17°. BT slide: 452. Dry bulb: 79.3°F. Wet bulb: 73.2°F. Barometric pressure: 1015 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.30	34.72	511.3	4.73	0.20
35	26.30	34.74	509.9	4.65	0.27
65	26.28	34.74	509.3	4.59	0.10
100	25.40	34.72	484.8	4.71	0.28
135	23.55	34.87	420.9	4.60	0.57
219	19.11	34.97	298.0	4.42	0.66
328	11.77	34.20	198.6	3.85	1.48
438	8.18	34.20	140.8	1.98	2.65
537	6.67	34.31	112.1	1.09	3.25
662	5.92	34.36	99.3	0.56	3.34
662	6.10	34.36	101.3	-	-
876	4.78	34.49	76.5	0.98	2.36
1096	4.04	34.52	66.8	1.08	2.91
1321	3.46	34.52	61.2	1.34	3.60

Table 17.--Observed oceanographic station data, Hugh M. Smith cruise 35 (cont'd)

Station 178 (O-79): 19°29'N., 158°18'W., October 5, 1956. Messenger time: 0044 GCT. Weather: 15, cloud coverage 6. Wind: 180° @ 02 kt. Sea: < 1 ft. Wire angle: 08°. BT slide: 457. Dry bulb: 80.6°F. Wet bulb: 73.5°F. Barometric pressure: 1013 mb.

OBSERVED

Depth, m.	T, °C.	S, °/oo	δ t, cl./ton	O_2, ml./L.	PO_4-P, µg at./L.
0	26.78	34.72	525.7	4.67	1.00
31	26.44	34.79	510.5	4.70	0.41
68	25.88	34.74	497.3	4.77	0.34
120	21.52	35.03	354.5	4.76	0.40
172	18.84	34.92	294.9	3.50	0.73
229	15.24	34.43	249.3	4.03	1.16
345	9.94	34.14	172.1	3.97	1.92
462	7.22	34.14	132.0	2.19	2.76
578	6.09	34.23	110.8	1.13	3.37
699	5.35	34.34	94.1	0.82	3.21
699	5.44	34.34	95.2	-	-
924	4.64	34.47	76.6	0.93	2.97
1153	3.84	34.49	67.1	1.14	3.31
1387	3.22	34.49	61.4	1.46	3.60

Table 18.--Primary productivity as determined by C^{14} uptake, Hugh M. Smith cruise 35

Station	Date, 1956	Surf. time, ZT	Position		mg.C/hr./m.^{3}, surface
			Latitude	Longitude	
1	8/8	2000	19°00'N	154°30'W	.036
2	8/9	0800	18°24'N	152°49'W	.161
3	8/9	2000	17°54'N	151°15'W	.0075
4	8/10	0800	17°11'N	149°29'W	.058
5	8/10	2000	16°43'N	148°02'W	.055
6	8/11	0800	16°29'N	146°30'W	.104
7	8/11	1955	15°27'N	145°10'W	.007
8	8/12	0800	15°05'N	143°35'W	.119
9	8/12	2000	14°30'N	142°09'W	.017
10	8/13	0800	14°05'N	140°33'W	.119
11	8/13	2000	13°40'N	139°08'W	.071
12	8/14	0800	13°04'N	137°27'W	.277
13	8/14	2000	12°27'N	135°54'W	.064
14	8/15	0800	11°09'N	135°00'W	.310
15	8/15	2000	09°33'N	134°52'W	.136
16	8/16	0800	07°57'N	134°39'W	.136
17	8/16	2000	06°19'N	134°39'W	.108
18	8/17	0800	05°08'N	134°44'W	.284
					-.174
19	8/17	2000	04°07'N	135°07'W	.142
20	8/18	0800	02°49'N	135°11'W	.348
21	8/18	2000	01°30'N	135°14'W	.082
22	8/19	0800	00°01'S	134°57'W	.509
23	8/19	2000	01°04'S	134°56'W	.187
					-.058
24	8/20	0800	02°42'S	134°52'W	.075
25	8/20	2000	04°34'S	134°58'W	.076
					.030
26	8/21	0800	06°09'S	135°02'W	.246
27	8/21	2000	07°52'S	135°04'W	-.035
28	8/22	0800	09°25'S	135°04'W	.160
29	8/22	2000	10°45'S	135°04'W	.038
					.008
30	8/23	0800	12°26'S	135°02'W	.167
31	8/23	2000	14°14'S	135°02'W	.091
					.007
32	8/24	0800	15°47'S	134°59'W	.333
					.226
33	8/24	2000	17°35'S	134°57'W	.055
34	8/25	0800	19°03'S	135°03'W	.312
35	8/25	2000	19°03'S	136°38'W	.013
36	8/26	0800	18°57'S	138°23'W	.065
					.028
37	8/26	2000	19°01'S	140°02'W	.006
					-.017
38	8/27	0800	18°58'S	141°39'W	.036
					.022
39	8/27	2000	18°57'S	143°00'W	.016
40	8/28	0800	17°21'S	142°51'W	.091
					.056
41	8/28	2000	15°44'S	143°00'W	.028
42	8/29	0800	14°05'S	143°05'W	.227
					.136

Table 18.--Primary productivity as determined by C^{14} uptake, Hugh M. Smith cruise 35 (cont'd)

Station	Date, 1956	Surf. time, ZT	Position		mg.C/hr./m.^{3}, surface
			Latitude	Longitude	
43	8/29	2000	12°21'S	143°04'W	.056
44	8/30	0800	10°47'S	143°01'W	.416
					.252
45	8/30	2000	09°22'S	143°02'W	.127
					.080
46	8/31	0800	07°48'S	143°03'W	.585
47	8/31	2000	06°15'S	143°04'W	.484
					-.032
48	9/1	0800	04°43'S	143°04'W	.217
					-.015
49	9/1	2000	03°06'S	143°06'W	.027
50	9/2	0800	01°24'S	143°08'W	.336
51	9/2	2000	00°02'N	143°01'W	.182
52	9/3	0800	01°36'N	143°01'W	.345
53	9/3	2000	02°02'N	144°35'W	.021
54	9/4	0800	01°56'N	146°22'W	.345
55	9/4	2000	01°59'N	148°42'W	.087
56	9/5	0800	01°57'N	150°36'W	.432
57	9/5	2000	00°28'N	151°14'W	.044
58	9/6	0800	00°24'S	151°24'W	.512
					.392
59	9/6	2000	02°03'S	150°59'W	.063
60	9/7	0800	03°50'S	151°00'W	.342
61	9/7	2000	05°29'S	151°10'W	.048
62	9/8	0805	07°05'S	151°04'W	.264
63	9/8	2000	08°45'S	150°59'W	.050
64	9/9	0800	10°04'S	151°01'W	.663
					.446
65	9/9	2000	11°37'S	150°59'W	.051
66	9/10	0800	13°19'S	151°06'W	.225
67	9/10	2000	14°59'S	150°50'W	.028
68	9/11	0800	16°45'S	149°52'W	.094
69	9/18	1640	17°26'S	149°52'W	1.412
70	9/18	1700	17°25'S	149°54'W	.075
					.037
71	9/18	1730	17°21'S	149°58'W	.015
72	9/18	2000	17°02'S	150°18'W	.032
					.016
73	9/19	0800	15°54'S	151°38'W	.017
74	9/19	2000	14°37'S	152°56'W	.056
75	9/20	0800	14°30'S	154°23'W	.083
76	9/20	2000	14°30'S	156°05'W	.011
77	9/21	0800	14°30'S	157°40'W	.115
					.032
78	9/21	2000	14°30'S	159°34'W	.014
					-.044
79	9/22	0800	13°26'S	159°58'W	.072
80	9/22	2000	11°51'S	160°11'W	.028
81	9/23	0800	10°19'S	159°57'W	.152
82	9/23	2000	08°57'S	159°55'W	.040
					.025
83	9/24	0800	07°30'S	159°51'W	.405
					.282

Table 18.--Primary productivity as determined by C^{14} uptake, Hugh M. Smith cruise 35 (cont'd)

Station	Date, 1956	Surf. time, ZT	Position		mg.C/hr./m.^{3}, surface
			Latitude	Longitude	
84	9/24	2000	05°57'S	160°04'W	.011
85	9/25	0800	04°27'S	159°57'W	.310
86	9/25	2000	02°53'S	159°53'W	.075
87	9/26	0800	01°21'S	159°59'W	.647
88	9/26	2000	00°02'N	159°50'W	.175
89	9/27	0800	01°03'N	158°48'W	.306
90	9/28	1325	01°57'N	157°28'W	.820
91	9/28	1340	01°57'N	157°28'W	.825
92	9/28	1400	01°57'N	157°31'W	.660
					-.010
93	9/28	1420	01°57'N	157°36'W	.366
94	9/28	1445	01°57'N	157°42'W	.483
95	9/28	1955	01°58'N	158°46'W	.179
					.051
96	9/29	0800	02°51'N	160°04'W	.466
					.219
97	9/29	2000	04°19'N	160°04'W	.051
98	9/30	0800	05°57'N	159°57'W	.428
99	9/30	2000	07°38'N	160°00'W	.022
					-.003
100	10/1	0800	09°16'N	159°57'W	.081
					.046
101	10/1	2000	10°28'N	160°02'W	.014
102	10/2	0800	12°00'N	160°06'W	.063
103	10/2	2000	13°34'N	159°46'W	.017
104	10/3	0800	15°13'N	159°21'W	.087
105	10/3	2000	16°49'N	158°58'W	.025
					.010
106	10/4	0800	18°28'N	158°36'W	.132

Table 19.--Zooplankton station data and sample volumes obtained in oblique hauls with 1-meter and 45-centimeter nets, Hugh M. Smith cruise 35

Station	Date, 1956	Time, ZT	Position		Depth, m.	Volume, cc./1000 m.^{3} [1]	Diameter of net
			Latitude	Longitude			
54-1	8/15	2135-2204	09°27'N	134°52'W	159	45.5	45 cm.
54-2	8/15	2131-2212	"	"	182	31.1	1 m.
56-1	8/16	2015-2045	06°20'N	134°39'W	175	47.7	45 cm.
59-1	8/17	2132-2202	04°00'N	135°08'W	175	94.4	45 cm.
59-2	8/17	2130-2205	"	"	200	71.0	1 m.
61-1	8/18	2117-2157	01°24'N	135°18'W	200	64.9	1 m.
61-2	8/18	2121-2155	"	"	175	51.9	45 cm.
63-1	8/19	2116-2152	01°10'S	134°57'W	169	79.7	1 m.
63-2	8/19	2120-2148	"	"	148	128.2	45 cm.
66-1	8/20	2116-2152	04°39'S	134°59'W	150	35.2	1 m.
66-2	8/20	2120-2148	"	"	131	45.1	45 cm.
68-1	8/21	0800-0835	06°09'S	135°02'W	169	16.1	1 m.
68-2 [2]	8/21	0802-0832	"	"	148	30.4	45 cm.
70-1	8/21	2128-2207	07°57'S	135°04'W	169	27.8	1 m.
70-2	8/21	2133-2204	"	"	148	35.0	45 cm.
72-1	8/22	0757-0831	09°25'S	135°04'W	200	11.5	1 m.
74-1	8/22	2109-2145	10°51'S	135°08'W	137	23.9	1 m.
74-2	8/22	2112-2142	"	"	120	32.5	45 cm.
76-1	8/23	0804-0839	12°26'S	135°02'W	175	12.7	1 m.
78-1	8/23	2113-2141	14°19'S	135°02'W	120	29.1	45 cm.
78-2	8/23	2110-2145	"	"	137	25.2	1 m.
80-1	8/24	0803-0837	15°47'S	135°00'W	169	16.7	1 m.
82-1	8/24	2212-2242	17°40'S	134°58'W	148	25.8	45 cm.
82-2	8/24	2207-2245	"	"	169	20.5	1 m.
83-1	8/25	0904-0938	19°04'S	135°03'W	150	2.2	1 m.
84-1	8/25	2114-2151	19°03'S	136°44'W	169	9.4	1 m.
84-2	8/25	2117-2146	"	"	148	8.3	45 cm.
86-1	8/26	0803-0837	18°57'S	138°23'W	175	2.1	1 m.
88-1	8/26	2114-2151	19°01'S	140°08'W	169	9.5	1 m.
88-2	8/26	2117-2147	"	"	148	6.9	45 cm.
90-1	8/27	0801-0835	18°57'S	141°49'W	163	0.9	1 m.
91-1	8/27	2157-2231	18°51'S	143°00'W	169	6.5	1 m.
91-2	8/27	2200-2226	"	"	148	6.3	45 cm.
93-1	8/28	0810-0843	17°21'S	142°51'W	169	2.8	1 m.
95-1	8/28	2121-2159	15°37'S	143°00'W	104	32.8	1 m.
95-2	8/28	2126-2154	"	"	91	25.3	45 cm.
97-1	8/29	0813-0847	14°06'S	143°05'W	169	27.6	1 m.
99-1	8/29	2109-2147	12°15'S	143°03'W	169	37.0	1 m.
99-2	8/29	2112-2143	"	"	148	21.9	45 cm.
101-1	8/30	0803-0836	10°47'S	143°01'W	169	19.9	1 m.
103-1	8/30	2109-2148	09°17'S	143°01'W	169	52.3	1 m.
103-2	8/30	2112-2142	"	"	148	28.2	45 cm.

[1] Jellies >2 cm. and organisms >5 cm. are not included.

[2] Doubtful meter reading.

Table 19.--Zooplankton station data and sample volumes obtained in oblique hauls with 1-meter and 45-centimeter nets, Hugh M. Smith cruise 35 (cont'd)

Station	Date, 1956	Time, ZT	Position		Depth, m.	Volume, $cc./1000\ m.^3$ 1/	Diameter of net
			Latitude	Longitude			
105-1	8/31	0802-0838	07°48'S	143°03'W	169	33.9	1 m.
107-1	8/31	2111-2147	06°10'S	143°04'W	150	42.4	1 m.
107-2	8/31	2115-2145	"	"	131	32.8	45 cm.
109-1	9/1	0802-0837	04°43'S	143°04'W	169	22.5	1 m.
111-1	9/1	2119-2158	03°01'S	143°06'W	169	146.7	1 m.
111-2	9/1	2123-2154	"	"	148	33.8	45 cm.
113-1	9/2	2222-2259	00°03'N	143°07'W	188	58.0	1 m.
113-2	9/2	2224-2255	"	"	164	46.5	45 cm.
115-1	9/3	2107-2144	02°01'N	144°40'W	156	45.8	1 m.
115-2	9/3	2110-2139	"	"	137	23.6	45 cm.
118-1	9/4	2112-2149	02°00'N	148°48'W	156	48.9	1 m.
118-2	9/4	2115-2146	"	"	137	24.2	45 cm.
121-1	9/5	2105-2143	00°28'N	151°09'W	156	44.4	1 m.
121-2	9/5	2109-2139	"	"	137	24.4	45 cm.
124-1	9/6	2103-2140	02°08'S	151°00'W	169	61.9	1 m.
124-2	9/6	2107-2137	"	"	148	32.6	45 cm.
126-1	9/7	2118-2156	05°36'S	151°11'W	143	43.1	1 m.
126-2	9/7	2121-2153	"	"	125	21.0	45 cm.
127-1	9/8	0815-0850	07°06'S	151°04'W	169	17.5	1 m.
129-1	9/8	2110-2145	08°50'S	150°59'W	137	24.1	1 m.
129-2	9/8	2113-2143	"	"	120	15.0	45 cm.
130-1	9/9	0839-0913	10°04'S	151°01'W	163	19.8	1 m.
132-1	9/9	2103-2146	11°42'S	151°00'W	137	59.0	1 m.
132-2	9/9	2112-2143	"	"	120	11.2	45 cm.
134-1	9/10	0804-0839	13°19'S	151°06'W	169	9.5	1 m.
136-1	9/10	2122-2205	14°54'S	150°47'W	169	30.2	1 m.
136-2	9/10	2127-2158	"	"	148	12.6	45 cm.
137-1	9/11	0807-0841	16°45'S	149°52'W	156	11.4	1 m.
138-1	9/18	2115-2158	16°59'S	150°22'W	175	12.5	1 m.
138-2	9/18	2125-2155	"	"	153	11.5	45 cm.
139-1	9/19	0803-0838	15°54'S	151°38'W	137	7.3	1 m.
140-1	9/19	2117-2154	14°32'S	152°56'W	169	19.4	1 m.
140-2	9/19	2121-2151	"	"	148	16.1	45 cm.
141-1	9/20	0808-0842	14°30'S	154°23'W	137	8.7	1 m.
143-1	9/20	2111- ?	14°30'S	156°11'W	163	18.2	1 m.
143-2	9/20	2114- ?	"	"	142	26.5	45 cm.
145-1	9/21	0808-0842	14°30'S	157°40'W	150	3.5	1 m.
146-1	9/21	2114-2153	14°30'S	159°40'W	163	10.1	1 m.
146-2	9/21	2119-2150	"	"	142	17.1	45 cm.
148-1	9/22	0805-0839	13°26'S	159°58'W	169	15.9	1 m.
150-1	9/22	2115-2153	11°46'S	160°11'W	169	24.9	1 m.
150-2	9/22	2120-2150	"	"	148	35.2	45 cm.

1/ Jellies >2 cm. and organisms >5 cm. are not included.

Table 19.--Zooplankton station data and sample volumes obtained in oblique hauls with 1-meter and 45-centimeter nets, Hugh M. Smith cruise 35 (cont'd)

Station	Date, 1956	Time, ZT	Position		Depth, m.	Volume, cc./1000 m.^{3} 1/	Diameter of net
			Latitude	Longitude			
152-1	9/23	0804-0839	10°19'S	159°58'W	169	14.6	1 m.
154-1	9/23	2120-2158	08°53'S	159°55'W	150	31.2	1 m.
154-2	9/23	2124-2154	"	"	131	25.5	45 cm.
156-1	9/24	0803-0838	07°30'S	159°51'W	163	18.4	1 m.
158-1	9/24	2110-2149	05°52'S	160°03'W	143	43.5	1 m.
158-2	9/24	2115-2145	"	"	125	26.6	45 cm.
160-1	9/25	0803-0838	04°27'S	159°58'W	137	22.8	1 m.
162-1	9/25	2111-2150	02°48'S	159°53'W	163	31.5	1 m.
162-2	9/25	2116-2146	"	"	142	22.5	45 cm.
165-1	9/26	2112-2149	00°05'N	159°51'W	137	75.3	1 m.
165-2	9/26	2115-2147	"	"	120	61.7	45 cm.
168-1	9/29	2117-2156	04°24'N	160°08'W	156	57.8	1 m.
168-2	9/29	2121-2153	"	"	137	39.1	45 cm.
170-1	9/30	2107-2144	07°44'N	160°00'W	169	22.9	1 m.
170-2	9/30	2111-2141	"	"	148	11.3	45 cm.
173-1	10/1	2110-2145	10°33'N	160°02'W	163	17.2	1 m.
173-2	10/1	2112-2145	"	"	163	17.6	45 cm.

1/ Jellies >2 cm. and organisms >5 cm. are not included.

Table 20.--Zooplankton station data and sample volumes obtained in surface hauls with a 1-meter net, Charles H. Gilbert cruise 30

Station	Date, 1956	Time, ZT	Position		Volume, cc./1000 m.^{3} 1/
			Latitude	Longitude	
1-1	8/16	0959-1029	01°24'N	133°49'W	4.7
2-1	8/17	0750-0820	00°24'N	133°09'W	9.3
3-1	8/17	2000-2030	00°01'S	133°02'W	68.6
3-2	8/17	"	"	"	74.8
3-3	8/17	2041-2112	"	"	73.5
3-4	8/17	"	"	"	77.2
4-1	8/18	0752-0823	00°54'S	132°22'W	15.7
5-1	8/18	2003-2033	01°29'S	132°03'W	38.6
5-2	8/18	"	"	"	47.4
5-3	8/18	2039-2109	"	"	48.9
5-4	8/18	"	"	"	45.1
6-1	8/19	0744-0815	02°44'S	131°42'W	8.4
7-1	8/19	1959-2030	03°08'S	131°35'W	29.7
7-2	8/19	"	"	"	25.9
7-3	8/19	2037-2108	"	"	31.2
7-4	8/19	"	"	"	46.8
8-1	8/20	0746-0815	04°26'S	131°39'W	7.5
9-1	8/20	2000-2030	04°49'S	131°48'W	43.0
9-2	8/20	"	"	"	44.1
9-3	8/20	2038-2108	"	"	48.0
9-4	8/20	"	"	"	49.1
10-1	8/21	0746-0816	06°02'S	132°17'W	2.7
11-1	8/21	1958-2038	06°20'S	132°10'W	17.4
11-2	8/21	"	"	"	22.1
11-3	8/21	2037-2107	"	"	14.7
11-4	8/21	"	"	"	23.8
12-1	8/22	0754-0824	07°32'S	132°05'W	4.7
13-1	8/22	1957-2028	08°02'S	132°03'W	9.4
13-2	8/22	"	"	"	10.9
13-3	8/22	2035-2105	"	"	18.2
13-4	8/22	"	"	"	17.7
14-1	8/23	0747-0818	09°22'S	132°10'W	3.7
15-1	8/23	1954-2027	09°48'S	132°07'W	13.7
15-2	8/23	"	"	"	12.2
15-3	8/23	2034-2104	"	"	14.8
15-4	8/23	"	"	"	11.8
16-1	8/24	0740-0820	10°51'S	132°00'W	2.8
17-1	8/24	1957-2028	11°10'S	131°56'W	30.7
17-2	8/24	"	"	"	28.9
17-3	8/24	2035-2105	"	"	21.6
17-4	8/24	"	"	"	18.9

1/ All fish, jellies > 2 cm., and other organisms > 5 cm. are not included.

Table 20.--Zooplankton station data and sample volumes obtained in surface hauls with a 1-meter net, Charles H. Gilbert cruise 30 (cont'd)

Station	Date, 1956	Time, ZT	Position		Volume, cc./1000 m.^{3} 1/
			Latitude	Longitude	
18-1	8/25	0750-0822	12°12'S	132°05'W	4.5
19-1	8/25	1956-2027	12°31'S	132°04'W	18.5
19-3	8/25	2033-2103	"	"	16.1
20-1	8/26	0749-0819	13°30'S	132°16'W	3.1
21-1	8/26	2002-2032	13°02'S	132°31'W	29.9
21-2	8/26	"	"	"	26.5
21-3	8/26	2040-2111	"	"	36.5
21-4	8/26	"	"	"	33.1
22-1	8/27	0749-0822	12°18'S	133°18'W	8.8
23-1	8/27	2001-2032	12°02'S	133°34'W	30.6
23-2	8/27	"	"	"	29.9
23-3	8/27	2040-2110	"	"	26.1
23-4	8/27	"	"	"	24.7
24-1	8/28	0742-0815	11°33'S	134°33'W	3.5
25-1	8/28	2002-2032	11°10'S	134°46'W	16.0
25-2	8/28	"	"	"	16.6
25-3	8/28	2040-2111	"	"	18.5
25-4	8/28	"	"	"	20.1
26-1	8/29	0800-0831	10°35'S	135°38'W	3.2
27-1	8/29	1955-2027	10°17'S	135°52'W	26.8
27-2	8/29	"	"	"	27.2
27-3	8/29	2083-2104	10°17'S	136°52'W	21.0
27-4	8/29	"	"	"	16.6
28-1	8/30	0801-0831	09°36'S	136°45'W	5.5
29-1	8/30	2000-2031	09°22'S	137°01'W	26.7
29-2	8/30	"	"	"	18.5
29-3	8/30	2038-2108	"	"	30.6
29-4	8/30	"	"	"	31.9
30-1	8/31	0802-0834	08°43'S	137°52'W	7.2
31-1	9/1	0756-0827	07°32'S	138°54'W	5.7
32-1	9/1	1957-2028	07°39'S	138°56'W	9.0
32-2	9/1	"	"	"	8.7
32-3	9/1	2035-2105	"	"	10.3
32-4	9/1	"	"	"	11.0
33-1	9/2	0750-0820	08°50'S	139°08'W	19.2
34-1	9/2	2005-2036	09°12'S	139°12'W	20.2
34-2	9/2	"	"	"	14.5
35-1	9/3	0754-0825	10°28'S	139°38'W	29.4
36-1	9/3	1959-2029	10°00'S	139°41'W	68.1
36-2	9/3	2034-2104	"	"	77.9

1/ All fish, jellies >2 cm., and other organisms >5 cm. are not included.